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Annual Report 1974-1975

Federal Energy Administration, Washington, D C

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ERRATA SHEET

Page 3 - Delete line 17.

- Line 26 should read, 'of costs related to doing business are also limited by the'

Page 7 - Line 19 should read, "an amount that represents the increase over May 1973"

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Annual Report 1974-1975



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FOREWORD

Section 15(c) of the "Federal Energy Administration Act of 1974" requires the Administrator to prepare and submit directly to the Congress and the President annually a report which shall include --

- (1) a review and analysis of the major actions taken by the Administrator;
- (2) an analysis of the impact those actions have had on the Nation's civilian requirements for energy supplies for materials and commodities;
- (3) a projection of the energy supply for the mid-term and a long term for each of the major types of fuel and the potential size and impact of any anticipated shortages, including recommendations for measures to --
 - (A) minimize deficiencies of energy supplies in relation to needs;
 - (B) maintain the health and safety of citizens;
 - (C) maintain production and employment at the highest feasible level;
 - (D) equitably share the burden of shortages among individuals and business firms; and
 - (E) minimize any distortion of voluntary choices of individuals and firms;
- (4) a summary listing of all recipients of funds and the amount thereof within the preceding period; and
- (5) a summary listing of information-gathering activities conducted under Section 13 of this Act.

In compliance with that requirement, this is the First Annual Report of the Federal Energy Administration.

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INTRODUCTION

The Federal Energy Administration was created by act of Congress on May 7, 1974, "to reorganize and consolidate certain functions of the Federal Government in a new Federal Energy Administration in order to promote more efficient management of such functions." Although this task is not yet complete, progress has been made in Energy policy development and implementation. We believe that an overview of FEA activities is, therefore, appropriate.

From the time of the creation of the Federal Energy Administration until the end of 1974, much of the expertise and resources of FEA had been dedicated to the production of two documents; the Project Independence Report and the Comprehensive Energy Plan. These were delivered to the Congress in November and December 1974 respectively. After further study, the President proposed, in his State of the Union Message, a series of legislative and administrative actions designed to accelerate exploitation of our energy resources and curtail imports of petroleum. Some of the administrative actions are now in effect, and their administration and effects are also described in the text. The content of each chapter of the report is summarized below.

Chapter 1 comprises a review and analysis of the main FEA developments and the impact these actions have had on the Nation's civilian requirements in compliance with the FEA Act, Section 15(c)(1) and (2). Three major regulatory programs are discussed in detail: (1) Price Regulations, (2) Oil Import Program, and (3) Petroleum Allocation Regulations.

Chapter 2 reports briefly on energy supply key projections for the midterm and long-term for the major types of fuel. These projections include potential size and impact of any anticipated shortage of the major fuels. The Comprehensive Energy Plan contains projections for the years 1975 and 1976 of the supplies of and the demands for the major energy resources. After reviewing this material it is apparent that its validity still holds at the present time. The same is generally true of the long-term projections which were determined for the Project Independence Report.

Therefore, we submit that the midterm supply forecasts required in this report may be found by reference to Chapter II and Appendix A of the Comprehensive Energy Plan submitted

to the Congress on December 9, 1974. Also, the long-term forecast of energy supplies is available by reference to Chapter II, Domestic Energy Supply, of the Project Independence Report, and the Section of Chapter I entitled, Energy Through 1985 -- What Happens if We Continue With Our Present Energy Posture? (page 23).

With regard to Section 15(c)(3) subsections (A), (C), (D), and (E), the President has determined that the needs of society can best be met by the combined legislative and administrative actions which were announced in the 1975 State of the Union Message, and amplified by the legislative package forwarded to the Congress on January 30, 1975.

Reference should be made to the Fact Sheet accompanying that January 15 address, which described the Energy Plan and the coordinated efforts to stimulate the over-all economy.

Subsection 15(c)(3)(B) asks for recommendations to maintain the health and safety of the citizenry. This matter bears to the greatest extent upon the consequences of exercising the powers granted by the Energy Supply and Environment Coordination Act of 1974. This matter and the overall impact of the legislative and administrative packages which the President has proposed and implemented are considered in detail in the Draft Environmental Impact Statement issued in March 1975 by the FEA, and for the Energy Independence Act of 1975 and Related Tax Proposals (DES 75-2). The Impact Statement analyzes the environmental and health hazards of the proposed program. Furthermore, it is the determination of the President that the program is necessary to maintain present living standards, including health care.

Chapter 3 contains a summary listing of all recipients of funds and the amount of funds between November 1, 1973 and May 13, 1975. Chapter 4 comprises a summary listing of information-gathering activities within FEA conducted under Section 13 of the FEA Act.

CHAPTER 1

THE MAJOR ACTIONS OF FEA

The major activities of the Federal Energy Administration are the regulatory programs controlling the pricing and allocation of crude oil, residual fuel oil, and refined petroleum products. The goals of these programs are those of the Emergency Petroleum Allocation Act of 1973. Essentially, the hardships of the shortages and increasing prices created because of the world energy shortage are to be shared as equitably as possible by the people of the United States. No company or individual is to be allowed to benefit unduly from the radically changed supply and demand which have followed the embargo. The following is a history of the pricing regulations which have pertained to petroleum, and an explanation of how the present regulations work.

Price controls in the petroleum industry began in August 1971, when the President ordered a 90 day freeze under the authority of the Economic Stabilization Act of 1970. At the end of the 90 days, oil companies were placed under the same system of controls as other sectors of the industry. Ceiling prices established during the freeze period became base prices, and a company could not charge prices above base prices unless: (1) the increases were justified, and (2) the company profit margins during the year did not exceed those during the base period. The petroleum industry was regulated in this manner until January 1973, when the industry was given more flexibility and some relief from profit margin limitations.

Early in 1973, there were sharp price increases, particularly in home heating oil, which led to a special regulation for the 23 largest oil companies. This regulation restricted price increases above specified percentages and prohibited any increase if profits exceeded base period profit margin levels. On June 13, 1973, all petroleum prices were frozen for 60 days, and on August 19, 1973, comprehensive regulations for the petroleum industry were issued by the Cost of Living Council. The Arab oil boycott beginning in October added to the problem by creating shortages as well as skyrocketing prices. In response, Congress passed the Emergency Petroleum Allocation Act in November 1973, under which current price regulations for the petroleum industry are being administered.

The regulations issued by the Cost of Living Council pursuant to the Economic Stabilization Act on August 19, 1973, encompassed a significant change in the method of regulation of the

petroleum industry. These regulations recognized the increasing U.S. dependence upon imported foreign petroleum price controls at all levels of the marketing chain: producer, refiner, wholesaler, and retailer. Later, this dollar-for-dollar passthrough of net increases in the cost of crude and refined products was mandated by Congress in the Emergency Petroleum Allocation Act of 1973.

Emergency Petroleum Allocation Act of 1973

Following the oil embargo of October 1973, which threatened to further exacerbate shortages and sharply raise prices of petroleum products, Congress passed the Emergency Petroleum Allocation Act of 1973, Public Law 93-159. This law required the President to issue regulations providing for the mandatory allocation of petroleum products within the U.S., at prices specified in such regulations. On December 4, 1973, the President issued Executive Order No. 11748 establishing the Federal Energy Office. That Executive Order delegated to the FEO all of the President's authority under the EPAA and the Defense Production Act of 1950 insofar as it relates to the production, conservation, use, control, distribution and allocation of energy. Moreover, the Chairman of the Cost of Living Council was directed to delegate to FEO such authority as the Council had that related to energy matters, which was done on December 26, 1973. The FEO issued regulations on January 15, 1974 which essentially incorporated the Cost of Living Council petroleum regulations.

On May 7, 1974, Congress enacted the Federal Energy Administration Act of 1974, Public Law 93-275, which created the Federal Energy Administration as an independent agency. This Act was implemented by the President on June 27, 1974, with the issuance of Executive Order No. 11790, transferring the functions of the FEO to the FEA.

Federal Energy Administration Price Regulations

FEA price regulations apply to all levels of the petroleum marketing chain: producer, refiner, wholesaler, and retailer.

Producers

Crude oil produced in the United States is either exempt, as to its first sale, from FEA regulations, or subject to the "two-tier" pricing system. Crude oil which is exempt is: oil produced from stripper wells (10 barrels or less per day) and the first sale of imported crude into U.S. commerce.

The two-tier pricing system for domestic producers of crude sets a ceiling price (the May 15, 1973, posted price plus \$1.35 a barrel) for sales of "old" crude oil. The second tier price (market price) may be applied to the following amounts of crude oil: (1) the amount of oil produced and sold above the amount produced and sold in the corresponding month of 1972 (that is, "old" oil; the excess is called "new" oil), plus (2) an amount of oil equal to the amount of "new" oil (this equivalent amount is called "released" oil).

The "released" oil provision is important to the pricing system as an incentive for increased production.

Refiners

A refiner's selling price is the May 15, 1973 price plus increased product costs and certain of the costs related to doing business; this computation is done once a month. These price increases are regulated to maintain the historical relationship among various classes of buyers. Passthrough of costs related to drug business are also limited by the historical profit margin of the refiners.

Wholesalers

The wholesale selling prices of petroleum products are limited to the May 15, 1973, selling prices plus a dollar-for-dollar passthrough of increased costs. Also, by amendment, the FEA has granted wholesalers nonproduct cost price increases on a cents per gallon basis. The amount per gallon varies for different products and volumes sold.

Retailers

The retail prices of petroleum products are limited to the May 15, 1973, selling prices plus a dollar-for-dollar pass-through of increased costs. By amendment, the FEA granted retailers of gasoline 1 cent and 2 cents per gallon increases in selling price to cover nonproduct cost increases, and fractional to 1 cent increases per gallon for middle distillates.

Lessors

FEA regulations require that the rent for real property used in the retailing of gasoline be the same as the rent charged for that property on May 15, 1973. The only exception is if the landlord of the property is not a refiner, wholesaler, or retailer. FEA lost the authority to control rents charged by private landlords upon the expiration of the Economic Stabilization Act in April 1974.

Exemptions

In order to encourage the continued production from wells that produced 10 barrels or less in the preceeding year (so-called "stripper" wells) which might otherwise be abandoned, the regulations provide that oil produced from these wells is exempt from price regulations, and may be sold at the market price. The regulation regarding stripper wells was specifically mandated by the Emergency Petroleum Allocation Act, and an amendment expanding the exemption was submitted to the Congress during May.

The first sale of imported crude into U.S. commerce is also exempt from price controls so as to not penalize U.S. firms which import foreign crude, or effectively eliminate imports while domestic demand exceeds supply.

Two-Tier System

Current figures show new oil selling at an average of \$11.50 per barrel, and old at \$5.25. As of January 1, 1974, of the total domestic crude oil available in the United States, about 60 percent represented domestic old oil, 17 percent was new oil, 10 percent was released oil, and about 13 percent was stripper well oil. As of December 31, 1974, the approximate figures were as follows: 66 percent old oil, 14 percent new oil, 8 percent released oil and 12 percent stripper oil.

Table 1

DOMESTIC PRODUCTION OF OIL SOLD AT CONTROLLED
AND UNCONTROLLED PRICES (in percent)

		Controlled	Uncontrolled		
Month		Old	New Oil	Released	Stripper Oil
1974	January	60	17	10	13
	February	62	15	10	13
	March	60	16	11	13
	April	60	16	11	13
	May	62	15	10	13
	June	63	15	9	13
	July	64	15	9	12
	August	66	14	8	12
	September	67	13	8	12
	October	66	14	8	12
	November	67	13	8	12
	December	66	14	8	12

Source: FEA

With respect to decontrol, the new oil, and stripper well provisions were designed to provide a mechanism whereby FEA could effect a very gradual price decontrol of crude oil. However, this is an extremely slow process, and in the short run, the percentage of domestically produced oil which is sold at the "controlled" price has been rising. Therefore, this system cannot be considered as a reasonable alternative to the President's proposed plan of crude oil price decontrol.

Table 2
CRUDE OIL PRICES 1974-75

Month		Wellhead Cost		Refiner Acquisition Cost		
		Old	New	Domestic	Import	Composite
		(dollars per barrel)		(dollars per barrel)		
1974	Jan.	\$5.25	\$ 9.82	\$6.72	\$ 9.59	\$ 7.46
	Feb.	5.25	9.87	7.08	12.45	8.57
	March	5.25	9.88	7.05	12.73	8.63
	April	5.25	9.88	7.21	12.72	9.13
	May	5.25	9.88	7.26	13.02	9.44
	June	5.25	9.95	7.20	13.06	9.45
	July	5.25	9.95	7.19	12.75	9.30
	Aug.	5.25	9.98	7.20	12.68	9.17
	Sept.	5.25	10.10	7.18	12.53	9.13
	Oct.	5.25	10.74	7.26	12.44	9.22
	Nov.	5.25	10.90	7.46	12.53	9.41
	Dec.	5.25	11.08	7.39	12.82	9.28
1975	Jan.	5.25	11.28	7.78	12.79	9.48
	Feb.	5.25	11.51	8.28*	13.01*	10.16*

*Preliminary

The incentive aspect of the "released" oil provision is highly significant. It provides an incentive to rework existing producing properties. For every barrel of new oil added to overall domestic production, a barrel of what would otherwise be old oil must be released from price controls.

Passthrough of Increased Product Costs

The FEA has adopted a mathematical system of determining allowable cost increases. This mathematical approach was used because of the complicated nature of the cost/price structure of refiners. It was determined that inclusion of all the elements essential to the cost determination would be best expressed in mathematical terms so that a proper audit trail could be maintained.

For purposes of describing the cost passthrough procedure, the following provides an explanation of the elements included, the interrelationships of the elements, and the intended results.

Dollar-for-Dollar Passthrough of Increased Costs

The price regulations applicable to refiners reflect the dollar-for-dollar product cost passthrough concept of the EPAA. A refiner may charge for petroleum products only an amount that represents: (1) the refiner's lawful May 15, 1973, selling price to a class of purchaser for that product plus an amount that represents the increase over May 6, 1973 levels in the cost of crude oil to that refiner, plus (2) some of the increased costs of doing business, such as increased labor, marketing, or utility costs. The first component is termed the "base price," which may be increased to reflect increased product costs. The second component of price is termed "nonproduct costs;" the increase may be above base prices to reflect certain increased nonproduct costs, subject to a profit margin limitation. These concepts were promulgated originally in the Cost of Living Council regulations and were subsequently adopted by the FEO.

Profit Margin Limitations

As previously noted, increases in specific types of nonproduct costs may also be passed through and reflected in a refiner's prices, but only if the refiner does not, in the fiscal year in which those costs are passed through, exceed its base period profit margin. "Profit margin" is defined in the regulations as a firm's profits expressed as a percentage of that firm's sales. The base period consists of any 2 fiscal years, other than the current one, beginning after August 15, 1968.

Carry Forward of Unrecouped Increased Product Costs

If refiners were required to raise prices immediately to reflect increased costs of crude oil, or forfeit the opportunity to recover increased costs at a later time, pressure to raise prices would be very strong. Thus, FEA regulations are designed to permit some flexibility in the allocation of costs.

Product costs that are not immediately recovered in 1 month may be carried forward and used, within certain limitations, in calculating prices in subsequent months until these costs are recovered.

Equal Application of Increased Costs Among Classes of Purchaser

FEA regulations require generally that refiners apply increased costs in order to increase prices equally among classes of purchaser of a particular covered product. Differences in weighted average May 15, 1973, selling prices among classes of purchaser are generally reflected by the same differences in current lawful selling prices for that product. A principal function of the class of purchaser concept is to preserve the price distinctions among classes of purchaser that customarily existed under free market conditions. Sellers are thus required to maintain a single lawful price for a product to all customers within a particular class, rather than having to establish individual maximum lawful prices to individual customers.

On August 30, 1974, FEA promulgated an emergency amendment limiting the amount of unrecovered increased product costs that a refiner may carry over after September 1, 1974. The amendment specifies the interrelation between the carry over of costs provision and the requirement for equal application of increased product costs among individual classes of purchaser.

Therefore, if a refiner elects not to add the increased product costs and increase the selling price to a class of purchaser, the refiner cannot recover those increased costs later by adding these costs to the unit price of any other class.

An additional amendment affects the refiner, reseller, or retailer, who wishes to recoup increased product costs that have been carried forward. He may raise his prices; however, the difference between the raised prices and the prices charged in the preceeding month may not exceed 10 percent of his total unrecovered increased costs. His total unrecovered increased costs are defined as the amount incurred by October 31, 1974, or the end of any month thereafter. This limitation was

imposed because of FEA's concern about large amounts of accumulated costs that provide the potential for drastic price increases if short-term supply problems arise.

Special Treatment of Certain Products

A "special product" rule was initially promulgated by the Cost of Living Council, when short supplies were imminent, and disproportionate passthrough of increased product costs on special products was a real possibility. The defined "special products" -- gasoline, No. 2 heating oil and No. 2-D diesel fuel -- were a significant portion of refinery output apparently with relatively inelastic demand. Restrictions to a proportional passthrough of increased costs on these products were deemed to be appropriate. These special products represented the overwhelming share of petroleum products purchased directly by individual consumers.

Propane, which is a basic fuel for home heating and cooking, was originally excluded from "special products" status by the Cost of Living Council because propane traditionally had been underpriced and so was in short supply. As refiners began allocating increased costs to propane, prices for propane rose much more quickly than prices for other products. FEA, therefore, amended its regulations to protect propane purchasers from disproportionate cost passthroughs.

Treatment of gasoline, originally designated as a "special product," has been modified. Under current FEA regulations, proportionate shares of increased product costs are calculated separately for No. 2 oils, general refinery products, and gasoline. Increased costs allocable to No. 2 oils or to general refinery products may be reallocated to gasoline, but increased costs may not be reallocated to No. 2 oils or to general refinery products from any other product category. Refiners may continue to allocate increased costs among products within the general refinery products category which also includes residual fuel oil and aviation fuels. In this manner, the general refinery products category is not permitted to bear a disproportionate share of increased costs, but a measure of pricing flexibility in the general products category is preserved.

Refiners that did not sell unleaded gasoline on May 15, 1973, currently are permitted to price unleaded gasoline at no more than 1 cent per gallon over the price for leaded gasoline with same or nearest octane number.

Allocated Crude Pricing

One other refiner pricing situation is covered by the regulations; pricing for crude which is allocated to equalize the supply among refiners. The regulation states that a refiner selling crude to another refiner must charge the weighted average price of all crude oil delivered to the refiner-seller in that month for that district, plus a handling charge of 30 cents per barrel, a transportation adjustment, and a gravity adjustment.

Gasoline Prices under the Import Reduction Program

As announced in the notice accompanying the proposed regulations issued by FEA on January 17, 1975, the President has determined that it is in the national interest to achieve a reduction in demand for petroleum products, so that we can reduce the dependence of this country on imports of foreign crude oil and petroleum products. A program to begin achievement of this objective was announced in the President's State of the Union message to the Congress.

FEA has continued to analyze and review the President's program and the options that are likely to reduce this country's reliance on imported petroleum, with the minimum hardship to the Nation's people and its economy. FEA has concluded that a larger share of the increased costs of petroleum should be allocated to the prices of gasoline rather than to the prices of other petroleum products.

The following changes of note have been made to the regulations in the last year. These are not the only major changes, but illustrate the dynamic way in which equity and the price relation to costs have been maintained.

Major Price Regulation Changes

Amended Price Regulations to Provide for "Released" Crude Oil -- Issued August 28, 1974

The price regulations governing the first sale of domestic crude oil were changed so that "released" oil as well as old and new oil would be included in price base production control when new production existed. The regulation was amended to provide that an amount of "released" crude oil equal to the amount of new crude oil produced and sold from a property could also be sold without regard to the ceiling price. This change was implemented in order to simplify the pricing

mechanism for domestic crude oil, to eliminate the incentive for inflated offers for new crude oil, and also to separate volumes of new, released, and old crude oil for purposes of the program to allocate old oil.

Amended Price Regulations to Prevent Certain Unrecouped
Increased Product Costs -- Issued August 30, 1974

An amendment to both the refiner and the reseller price rules was issued providing that failure to charge prices that reflect equal application of increased product costs to each class of purchaser, (except when the seller is precluded from charging such prices by terms of a contract in effect on September 1, 1974) will result in unrecouped increased product costs which cannot be recovered in a subsequent month. The purpose of the change was to prevent price discrimination among classes of purchasers and to preclude the possibility of increased costs, where not applied equally, being carried forward for future recovery.

Adopted Standards for Landed Costs Computation -- Issued
October 25, 1974

This amendment specified the manner in which "landed cost," the cost of imported crude oil, was to be computed. This established a mechanism for determining prices for transactions between affiliated entities (transfer pricing) and established that costs of imported crude oil were for purposes of the price regulations at the time incurred following a company's historic accounting procedures. The change was necessary to avoid the artificial inflating of costs of imported crude oil attributable to transfers between affiliated entities.

Amended Price Regulations to Allow Disproportionate Cost
Increase Passthroughs for Gasoline -- Issued November 1, 1974

This amendment eliminated the requirement that increased product costs could only be passed on by refiners in the form of higher prices for gasoline in the same proportion that gasoline was produced by that refiner. The same amendment also changed the "banking" rule for both refiners and resellers by limiting the amount of previously unrecouped increased product costs that may be passed through so that prices are maintained at the level that existed at the end of

any month thereafter. The first change was to permit greater flexibility in the allocation of costs to gasoline which relieves the pressure to add costs to other products. The second change was to prevent significant price increases, attributable to previously unrecovered increased costs, if a period of relative scarcity were to occur.

Amended Certain Price Regulations Pertaining to Nonproduct Cost Passthroughs -- Issued November 29, 1974

This amendment eliminated the prenotification provisions for price increases based on increased nonproduct costs, simplified the procedures for implementing such price increases, limited the nonproduct costs that could be used to justify price increases and, at the same time, improved the ability of FEA to monitor the basis for those increases. There were two principal administrative reasons for eliminating the prenotification provisions: to conform to the method used for increased product costs and to eliminate use of the outdated and confusing form that had been used for prenotification.

Amended Certain Price Regulations Pertaining to Natural Gas Liquids -- Issued December 19, 1974

A new subpart K was issued which provided a set of price rules tailored specifically for the operations of a natural gas liquids gas processing plant. The main features are: provision for the passthrough of the increased costs of natural gas shrinkage attributable to the operations of a gas processing plant (the equivalent of increased costs of crude petroleum for a crude oil refining entity); provision for a 0.5 cent per gallon increment charged for natural gas liquid products for increased nonproduct costs incurred by gas processors since May 15, 1973; and a provision for permitting gas processors to adjust their actual May 15, 1973, selling prices to determine maximum lawful prices with minimum levels of 8.5 cents, 9 cents, and 10 cents per gallon for propane, butane and natural gasoline respectively. The general purpose of these amendments was to provide a set of regulations more consistent with the specific characteristics of gas processors. Specifically, the changes were to place processors on a par with refiners, to allow for the recoupment of increased nonproduct costs, and to deal with the circumstances of abnormally low prices charged by gas processors as of May 15, 1973.

Amended Price Regulations to Passthrough Import Fees -- Issued
February 28, 1975

This amendment reflects a determination by the President that a reduction in the demand for crude oil and petroleum products could be obtained by increasing the import fees on these products. FEA amended the price regulations (effective March 1, 1975) to include the mechanism for the passthrough of import fees. In addition, the price regulations were amended to provide for the required pro rata allocation of increased product costs, except for gasoline, which was permitted disproportionate allocation of increased product costs. The amendment also provided more flexibility for refiners to comply with the equal application of increased cost requirement by allowing them to designate product categories other than those specified by FEA, upon notice to the FEA.

Oil Import Program

The United States has imported increasing supplies of oil since the end of World War II. Because of this increasing rate of oil imports there was concern that nondevelopment of our resources would leave the United States without a sufficient petroleum industry for developing our own abundant resources in time of need. In addition, there was concern that the United States would become overly dependent on suppliers of oil in hostile or unstable foreign nations. Therefore, in 1955 President Eisenhower requested that oil companies voluntarily restrict their crude oil imports. However, imports continued to rise, especially by companies expanding their foreign operations. By 1957, imports of crude oil and products were 575 million barrels, or about 18 percent of domestic consumption.

In July 1957, the President established an organized Voluntary Oil Import Program under the direction of the Department of the Interior. Nevertheless, many companies failed to comply with the quotas issued by the DOI, and imports rose again in 1958 to 619 million barrels.

As a result, on March 10, 1959, President Eisenhower issued Presidential Proclamation No. 3279 establishing a mandatory oil import quota. The program was designed to ensure exploration for and development of new hemisphere reserves which were not being exploited due to imports of foreign oil. The import quota's legal basis was the Trade Expansion Act of 1954, which authorized adjustment of imports for national security reasons. In 1956, 1967, and to a lesser extent, in 1970, supply disruptions of Mid-east oil imports were

experienced, usually as a result of Arab-Israeli hostilities. At such times, however, excess capacity existed in the United States and elsewhere; and the international oil companies were able to effect substitution from other sources to make up for the loss of Arabian oil. So long as the world surplus exceeded any one country's production, and so long as the exporting countries acted independently, the international oil companies were able to control the world market by shifting supplies to meet user needs. However, with the formation of the OPEC Cartel, control gradually slipped from the oil companies to the producer governments. Thus, the stage was set for the increasing insecurity of our oil supplies, greater susceptibility to political manipulation, and vulnerability to major price increases.

As demand accelerated, relative domestic reserves and production capacity declined, until in 1973, import quotas had to be lifted to prevent shortages and permit the institution of a program that would effectively encourage U.S. exploration and production capacity. Instead of quotas, a set of import fees was substituted, pursuant to the Trade Expansion Act of 1962, the successor to the 1954 Act.

Under this program, established by Presidential Proclamation No. 4210, in April 1973, moderate fees were established on both crude oil and petroleum product imports. Importers were granted fee-free licenses for a specified percentage of their imports based on the importers' refinery capacity and also in consideration of the old quota levels. The percentage of these fee-free allocations relative to 1973 levels are decreasing in yearly stages so that the percentage will reach zero by 1980.

The import fee system was designed to provide economic incentive to increase domestic production and refinery capacity while allowing greater levels of imports into the United States, over and above the quotas established by the earlier program. This change in the program was necessitated because U.S. domestic supplies were not keeping pace with rapidly increasing demand; so an increased reliance on imports was a short-term means of meeting the increase in demand. Therefore, existing tariffs on oil were suspended and imports in excess of existing quota levels were authorized. At this time, import fees were moderate for crude oil in excess of the gradually diminishing quota levels in order to maintain some long-range disincentive to import crude oil at the expense of increased domestic refinery capacity.

The basis for the increased fee was the Administration's perception that oil imports were becoming an increased portion of U.S. consumption. The higher cost of such imports was

having a negative effect on U.S. balance of payments. As a result of the embargo by OPEC countries, the increased reliance of imports was making the United States vulnerable to the political aims of the exporting nations. In order to deter increasing imports, and encourage domestic exploration and production, the higher fee was imposed.

On January 23, 1975, President Ford issued Proclamation No. 4341 pursuant to Section 232 of the Trade Expansion Act of 1962, as amended. Section 232(b) provides, in part, that if, as a result of an investigation conducted by the Secretary of the Treasury, it is determined that an article is being imported into the United States "in such quantities or under such circumstances as to threaten to impair the national security," then the President is to be promptly advised, and unless he determines otherwise, the President

"shall take such action, and for such time as he deems necessary to adjust the imports of such article and its derivatives so that such imports will not threaten to impair the national security."

After receiving the national security finding of Secretary Simon and the recommendation of the Administrator of FEA that substantially increased import fees be imposed, the President issued Proclamation No. 4341 imposing a supplemental fee on imports of \$1.00 effective February 1, 1975, to be increased by an additional \$1.00 effective March 1, 1975, and by another \$1.00 effective April 1, 1975, for a total supplemental fee of \$3.00 per barrel.

The preexisting import license fee program imposed in 1973 by Presidential Proclamation No. 4210 remains in effect under the new program, but the fees are accelerated immediately rather than phased in, to their maximum levels of \$0.21 per barrel for crude oil and \$0.63 per barrel for petroleum products. Under the new program, the phaseout system of fee-free allocations continues with respect to the preexisting license fees adjusted to their maximum levels. No fee-free allocations are permitted, however, for any supplemental import fees.

Once a decision was made to substantially increase oil import fees, it became apparent that the portion of FEA's Old Oil Allocation Program, designed to provide price relief to importers of refined petroleum products, could better be accomplished by providing relief in the form of reductions in the oil import fee.

The President's January 23 Proclamation authorized the supplemental fee on imported petroleum products to be less than the supplemental fee on crude oil. This fee was to be of the same approximate dollar amount as the value of an "entitlement" issued under the Old Oil Allocation Program.

The drastic rate increase as explained by President Ford in his 1975 State of the Union message, is designed to decrease total oil imports, which would alleviate our balance of payments deficits and encourage domestic production.

On March 4, 1975, the President issued Proclamation No. 4355, which deferred the second and third supplemental fees increase scheduled for March 1 and April 1, and the corresponding reductions on products until May 1 and June 1, respectively. This left the supplemental fee at \$1.00 until May 1, and the fee on most products at zero. On April 30, 1975, the President issued Proclamation No. 4370, which deferred the \$2.00 and \$3.00 fee, and the corresponding reductions, for up to 30 days, to allow time for other energy programs under study to be given full consideration. The President stated that the deferred fees would be reimposed "should alternative programs for discouraging imports not be formulated in a timely fashion or should such programs fail to protect adequately U.S. national security interests."

The imposition of \$1.00 license fee increase on February 1 added to the present costs of imported oil and caused imports of oil products in February and March to decrease significantly. Table 3 shows the import values of oil in barrels and in dollars for 1974 and 1975. It should be noted that in March the dollar amount of imports, as well as the physical amount of oil imported, decreased from the level of the previous year.

The decline of actual total imports from January to February was 45 percent and from February to March, 23 percent. Although the program is intended to be altered with the passage of the President's legislative energy program, FEA has projected the reduction of imports which will be effected by the increased license fee. Table 4 shows the base case and program case projections obtained by using the FEA short-term petroleum model which forecasts demand for various oil products using macroeconomic variables in a series of regression equations to estimate the demand for each product. The individual oil product demands are then aggregated to estimate overall demand for petroleum.^{1/} The difference between these two cases is the best FEA projection of demand and import reduction due to the increased license fee.^{2/}

^{1/} A more detailed description of the model is contained in FEA Technical Report 74-5, "National Petroleum Product Supply & Demand," November 8, 1974.

^{2/} Environmental Report of Modifications to the Mandatory Oil Import Program: A \$3 Import Fee. FEA, January 21, 1975.

Table 4

REDUCTION IN OIL IMPORTS DUE TO IMPORT LICENSE FEES
(In Thousand Barrels/Day)

Quarters	1975			1976				1977
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	Avg/Q
Base Case	15,138	16,188	18,017	18,095	16,424	16,518	18,304	18,256
Import Fee Program	15,415	15,302	17,036	16,411	14,856	14,912	16,540	16,318
Difference Due to Import Fee	723	786	981	1,684	1,568	1,606	1,764	1,938

Source: FEA

Finally, the revenue from the import license fee program will be considerable. Table 5 shows gross and net receipts from the oil import license fees for 1973 and 1974. This period precedes the acceleration of fee schedule, and imposition of supplemental fee on February 1. At the present fee level, assuming 6 million barrels per day, gross receipts would be over \$7 million per day.

The significance of the fee receipts is that the added cost must be passed to final consumers at some point in time, and the lower demand which results will be directly translated into import reductions. Placing the fee on petroleum imports is consistent with the philosophy of a free domestic market.

Table 5
IMPORT LICENSE FEE RECEIPTS 1973-4

Month		Gross Receipts	Refunds ^{1/}	Net Receipts ^{2/}
1973	Jan.	--	--	--
	Feb.	--	--	--
	March	--	--	--
	April	--	--	--
	May	3,208,586	--	3,208,586
	June	3,291,339	--	3,291,339
	July	3,481,797	--	3,481,797
	Aug.	2,110,526	40,166	2,070,360
	Sept.	1,909,016	507,004	1,402,012
	Oct.	8,611,745	1,082,269	7,529,476
	Nov.	370,384	358,421	11,963
	Dec.	1,166,964	445,413	721,551
Total		<u>24,150,356</u>	<u>2,433,273</u>	<u>21,717,084</u>
1974	Jan.	2,219,155	682,995	1,536,160
	Feb.	2,203,332	1,041,675	1,161,657
	March	2,221,722	280,864	1,940,858
	April	6,085,165	759,825	5,325,340
	May	4,342,033	1,937,746	2,404,287
	June	4,381,584	498,992	3,882,592
	July	4,397,748	427,305	3,970,443
	Aug.	4,540,290	1,137,851	3,402,439
	Sept.	3,949,605	774,456	3,175,149
	Oct.	6,726,493	450,245	6,276,248
	Nov.	2,856,203	328,218	2,527,985
	Dec.	3,649,997	855,089	2,794,908
Total		<u>45,573,327</u>	<u>9,175,261</u>	<u>38,398,066</u>

^{1/} Refunds are mostly for unused portions of licenses, and for oil used in asphalt production.

^{2/} Net receipts are not adjusted for refunds to Puerto Rico, the Virgin Islands, Guam, or American Samoa.

Source: FEA

Petroleum Allocation

On November 27, 1973, under the stress of the Arab oil embargo, the Emergency Petroleum Allocation Act was signed into law. The allocation regulation which that law required was to take many objectives into account to the maximum extent possible. They are listed below:

- (1) Protection of public health, safety, and welfare (including maintenance of residential heating, such as individual homes, apartments, and similar occupied dwelling units), and the national defense.
- (2) Maintenance of all public services (including facilities and services provided by municipally, cooperatively, or investor owned utilities or by any state or local government or authority, and including transportation facilities and services which serve the public at large.
- (3) Maintenance of agricultural operations, including farming, ranching, dairy, and fishing activities, and directly related services.
- (4) Preservation of an economically sound and competitive petroleum industry, including the priority needs to restore and foster competition in the producing, refining, distribution, marketing, and petrochemical sectors of such industry, and the preservation of the competitive viability of independent refiners, small refiners, non-branded independent marketers, and branded independent marketers.
- (5) The allocation of suitable types, grades, and quality of crude oil to refineries in the United States to permit such refineries to operate at full capacity.
- (6) Equitable distribution of crude oil, residual fuel oil, and refined petroleum products at equitable prices among all regions and areas of the United States and sectors of the petroleum industry, including independent refiners, nonbranded independent marketers, branded independent marketers, and among all users.
- (7) Allocation of residual fuel oil and refined petroleum products in such amounts and in such manner as may be necessary for the maintenance of exploration for, and production or extraction of, fuels, and for required related transportation.
- (8) Economic efficiency.

- (9) Minimization of economic distortion, inflexibility, and unnecessary interference with market mechanisms.

The regulations which were promulgated by the Federal Energy Office and later the Federal Energy Administration succeeded in fulfilling some of these requirements by setting up a series of allocation programs for different categorical groupings.

Fortunately, with the end of the embargo, fuel supplies with the exception of propane have been more than sufficient. The FEA has been able to turn its attention to some of the other objectives of the Act, especially maintaining the structure of the petroleum industry with emphasis on the status of small and independent refiners and independent marketers.

Allocation Regulations

The Emergency Petroleum Allocation Act of 1973 provides specific temporary authority for the allocation of crude oil, residual fuel oil, and refined petroleum products to deal with shortages or distribution dislocations of these products. Broadly speaking, FEA has exercised its authority through two allocation programs -- one for crude oil and one for the products refined from crude oil.

Both crude oil and refined petroleum products are allocated pursuant to the Mandatory Petroleum Allocation Regulations. These regulations were issued on January 14, 1974, to provide the basis for mitigating the effects of the product shortage caused by the Arab embargo. Upon the termination of the embargo, adequate crude oil supplies became available such that for the 1974-1975 winter refined products other than propane have no longer been in short supply.

In spite of ample product supplies the Act requires FEA to continue the allocation program with respect to all products unless a particular product is exempted from regulation in accordance with procedures set forth in the Act. FEA has adjusted the initial January 14, 1974 regulatory program to reflect increased supplies. For example, some allocation levels, which determine the amount of fuel a purchaser is entitled to purchase for a certain use, have been increased. In the event of new shortages, FEA would take action to amend its regulations to reflect such shortages.

Crude Oil Allocation Programs

There are three primary programs by which crude oil is allocated under the Mandatory Petroleum Allocation Regulations. First, domestic crude oil supply relationships existing on December 1, 1973, have been frozen to ensure continuing supplies to small and independent refiners and to provide a supply base for calculation of buy/sell list amounts. Second, allocation program, known as the buy/sell list program, has been established among refiners to provide access to crude oil supplies for small and independent refiners. This program is generally designed to protect the competitive viability of small and independent refiners and to assure adequate supplies of refined products in all geographic regions on an equitable basis. Third, the entitlements program is designed to provide all refiners with equal access to low priced domestic old crude oil to mitigate widely divergent feedstock costs among refiners resulting from the two-tier price system. The programs are discussed more fully below.

December 1, 1973 Supplier/Purchaser Freeze

The supplier/purchaser rule for domestic crude oil basically provides that all supplier/purchaser relationships in effect under contracts for sales, purchases, and exchanges of domestic crude oil on December 1, 1973, shall remain in effect for the duration of the mandatory allocation program.

The supplier/purchaser freeze as of December 1, 1973, (the December 1 rule) does not apply to the first sale of crude oil from a stripper well lease, nor to forced sales under the buy/sell list. In addition, as to new and released crude oil only, the freeze may be broken if a new purchaser outbids the present purchaser.

The decision to adopt the December 1 rule was made for three principal reasons: first, the December 1 rule helped to maintain intact most of the preexisting national distribution system for domestic crude oil, as there were indications the system could disintegrate during the last quarter of 1973.

The second major reason for the December 1 rule was to establish a supply floor from which the buy/sell list supply estimates could be furnished. The initial buy/sell list for February through April 1974 depended upon each refiner being able to estimate its own crude oil availability for a 3 month period. Without maintaining existing supplier/purchaser relationships, it would have been virtually impossible to make the estimates.

The December 1 rule enables FEA to minimize the amount of crude oil that had to be allocated through forced sales under the buy/sell list by preventing crude supply imbalances among refiners from worsening during the critical beginning of the mandatory allocation program.

The third principal reason for adoption of the December 1 rule was that it preserved access by small and independent refiners to price controlled domestic crude oil. Without this rule, many small and independent refiners could have been supplanted or cut off by major integrated refiners.

Finally, the December 1 rule has an important function when considered in conjunction with FEA's price controls on old oil at the producer level. With old oil supply arrangements frozen, producers do not have the ability to shift purchasers, and the present purchaser has no incentive to offer a price for old oil production in excess of the lawful ceiling price.

Buy/Sell List Program

Under the buy/sell program as currently in effect, each small refiner and independent refiner is entitled to purchase in each 3 month allocation quarter an amount of crude oil equal to the difference between: (1) one-quarter of the crude oil it refined during the year, 1972, and (2) the volume of its runs to stills during the period February through April 1974, subject to processing agreement adjustments and increased allocation amounts, taking into account post-1972 capacity. Small refiners are refiners with a total capacity not in excess of 175,000 barrels per day, and independent refiners are refiners (regardless of size) that basically possess less than 30 percent coverage for their capacity in controlled crude oil production. Purchases by small and independent refiners, called refiner-buyers, are made from the 15 U.S. refiners which are neither small nor independent within the meaning of the Allocation Act. This group, called refiner-sellers, includes the 15 largest integrated oil companies in the United States, except for several firms classified as independent refiners by reason of their relatively small amount of controlled production. Each refiner-seller's share of the total sales obligation under the buy/sell list is fixed; it is the ratio of each refiner-seller's refinery capacity to that of the total refinery capacity of all 15 refiner-sellers as of January 1, 1973.

The current buy/sell list program has been in effect since June 1, 1974. The program in effect for February through May 1974 was based on each refiner's supply estimates (with no distinctions between majors and independent and small refiners). Each refiner with supplies less than the national average (as calculated by FEA) was permitted to purchase

supplies up to the national average from refiners with supplies in excess of the national average. The intent was to permit all refiners in this period of extreme shortages to operate at the same supply to capacity ratio.

FEA's special pricing rules governing allocation sales of crude oil under the buy/sell program provide that a refiner-seller may charge the weighted average price of all crude oil delivered to it in the area of the country where the sale is made in the month in which the sale is made. The seller may also add to the price a handling fee of 30 cents per barrel and may adjust the price to take into account the fact that the crude oil sold may be of a higher or lower grade than the seller's average grade.

Due to surplus crude oil supplies in the world market and FEA's adoption of the entitlements program, it is estimated that, of the approximate total purchase opportunity of 100 million barrels on the list, about 60 to 70 percent will be purchased in the allocation quarter beginning March 1, 1975. This contrasts with a utilization of between 85 and 90 percent in prior allocation quarters.

Old Oil Allocation Program

The FEA adopted the final regulations for its old oil allocation program (the entitlements program) in November 1974. The program is designed to equalize substantially costs of crude oil for domestic refiners and to enable independent refiners and marketers who depend heavily upon high cost crude to remain competitive with those having lower crude costs. FEA's rationale underlying its adoption of the program was that some refiners, including the major oil companies as a class, enjoyed far greater access to price controlled old oil than certain other refiners, including small and independent refiners.

The entitlements program allocates low priced old oil proportionately among all refiners based on their levels of crude runs in a particular month, thus significantly reducing cost disparities which were in existence between refiners with access to old oil and those dependent on higher cost domestic and foreign crude oils.

Each month, FEA establishes a national average ratio of old oil supplies to crude runs to stills. By means of a notice published in the Federal Register, all refiners are issued entitlements equal to the national average ratio, with additional entitlements being issuable to small refiners. Refiners with less than the national average supplies of old oil will then sell their excess entitlements, and refiners with a higher level of old oil supplies than the national average will have to buy entitlements for these excess old oil supplies.

The issuance of entitlements is based on a refiner's actual crude runs, rather than refinery capacity, so that refiners' product outputs are more effectively cost equalized.

Every month, FEA determines the national old oil supply ratio and publishes 40 days after the close of the month a listing showing the number of entitlements issued to each refiner for that month. Refiners, which sell entitlements, use the proceeds to offset the cost of their high priced imported or domestic crude oil, a benefit which is passed through to their customers.

Small refiners were given special consideration under the entitlements program. First, a bias provides for issuance of incremental entitlements to small refiners over and above the national crude runs ratio to old oil receipts for the particular month. The dollar value of these incremental entitlements has been calculated to be equivalent to the maximum subsidy received by small refiners under the oil import program, with an upward adjustment to take the recent rate of inflation into account. In addition, small refiners required to purchase entitlement are being phased into the full amount of their purchase obligation, to enable them to file any necessary applications for exceptions and to adjust their business operations and product prices to their increased costs under the program.

Finally, the entitlements program was modified from the form in which it was initially issued to eliminate issuances of entitlements with respect to imports of residual fuel oil and No. 2 home heating oil after February 1, 1975. This amendment was made because the increased import fee structure under the President's energy program provides for a lesser fee for product imports than for crude oil.

Refined Product Allocation Programs

The refined products allocated under FEA regulations include propane, butane, natural gasoline, motor gasoline, distillate fuels, aviation fuels, residual fuel oil, naphthas, gas oils, benzene, toluene, mixed xylenes, hexane, lubricants, greases, special naphthas (solvents), lubricant base stock oils, and process oils.

The allocation program established fixed supplier/purchaser relationships to assure a continued flow of supplies by providing the maximum number of purchasers with currently identifiable suppliers. Generally, suppliers were directed to

supply their 1972 purchasers in order to comply in the most convenient administrative manner with the requirements of the Act. These requirements included that purchasers be supplied at 1972 base levels, or a pro rata reduction from such levels, in the event of a shortage. In the case of motor gasoline, a purchaser's base period supplier for each month, therefore, is his supplier for the corresponding month of 1972; so that his supplier in March 1975 was also his supplier in March 1972. Purchasers without 1972 suppliers are assigned base period suppliers. Some fuels, however, are allocated on a quarterly basis, rather than monthly, and the base period may be a month or quarter of 1973 rather than 1972.

Supplier/purchaser relationships are generally established for the duration of the allocation program. However, supplier/purchaser relationships for consumers are somewhat flexible, considering that the relationship generally exists for the benefit of the buyer. Base period suppliers must offer to their base period purchasers (including assigned purchasers) during each allocation period the amounts of product required by FEA's regulations. The base period purchaser, however, is not required to purchase his entitlement. Indeed, the purchaser in times of relative surplus may purchase his requirements from a non-base period supplier, who has surplus product for sale. The supplier/purchaser relationship may be terminated by mutual agreement.

Allocation Entitlements

Although supplier/purchaser relationships are fixed by reference to the various base periods, the amount of product to be allocated to a purchaser depends on whether the purchaser is an ultimate consumer or a marketer of products.

Consumers of products are classified as either end-users (relatively small purchasers) or wholesale purchaser/consumers (large purchasers). Allocation levels have been established for certain uses of each product. A consumer has no allocation entitlement unless his use of a product has been accorded an allocation level. Consumers without allocation entitlements because their particular use of a product has no priority, may purchase a product when the supplier has surplus available for sale.

Allocation levels vary according to the priority assigned each use. Agricultural production has the highest allocation level -- 100 percent of current requirements not subject to a pro rata reduction by application of an allocation fraction. Other users may have an allocation level expressed as 100 percent of current requirements subject to pro rata reduction by application of an allocation fraction or as a percent of base period use.

Thus, the category emergency services use of residual fuel oil has an allocation level of 100 percent of current requirements, while industrial use of residual fuel oil is accorded an allocation level of 100 percent of base period use.

A purchaser whose allocation level is subject to an allocation fraction must accept a pro rata reduction of his basic entitlement if for an allocation period his supplier has insufficient product to meet the needs of his customers (whose allocation entitlements are subject to a fraction).

Product marketers (wholesale purchaser-resellers) do not have allocation levels since allocation levels are based upon the use of a fuel. Marketers purchase from their suppliers in order to sell the product to consumers or to other marketers. A marketer's allocation entitlement, generally, is based upon his purchases from his base period supplier for that period.

Allocation Fractions

The premise of an allocation program is short supply of product, resulting in a need for allocations. Many, if not most, purchasers will be unable to purchase their actual product requirements. The mandatory allocation program accords an allocation level of 100 percent of current requirements to agricultural production, Department of Defense use, and for some services. All other purchasers with allocation entitlements may be unable to purchase their current requirements or entire base period volumes during a shortage. The allocation fraction is a method by which a supplier assures that his purchasers which must receive less than their requirements will share the available supplies on a pro rata basis.

For each allocation period, a supplier determines his total supplies and then subtracts amounts certified for delivery under allocation levels for that period, not subject to an allocation fraction and amounts for the state set-aside. The remaining supplies are available for allocation to the remaining persons and firms which have a supplier/purchaser relationship with the supplier under FEA's regulations.

The supplier then determines his supply obligation for the allocation period. The supply obligation is the allocation requirements of those end-users, wholesale purchaser-consumers, and marketers with whom the supplier has a supplier/purchaser relationship and whose requirements are subject to the allocation fraction. The allocable supply for the allocation period is then divided by the supplier's supply obligation and the resulting fraction is the supplier's allocation fraction.

If the supplier's allocation fraction is less than one, for example, nine-tenths, then those purchasers subject to the fraction will be offered only nine-tenths of their allocation requirements. If the allocation fraction is greater than one, then the supplier will have surplus product for distribution under FEA's surplus product.

Surplus Product

If a supplier's allocation fraction exceeds one, the supplier distributes product as if his fraction were one. Special rules apply to the disposition of the surplus product which remains.

Upon determining that his allocation fraction will exceed one, large suppliers are required to report their surplus to FEA. Upon receipt of the notice, FEA can direct the supplier to distribute his surplus to certain purchasers, retain the surplus in inventory, or take other appropriate action. For example, FEA might divert a supplier's surplus to another supplier who has a very low allocation fraction to provide relief to that supplier's customers. If FEA does not direct the disposition of the supplier's reported surplus, he is then required to offer a portion of his surplus to his branded and nonbranded independent marketer customers. These marketers must be offered the same proportion of the supplier's surplus product as their 1972 purchasers bear to the supplier's supply obligation. Upon compliance with this rule, the supplier may distribute his remaining surplus at his discretion. Suppliers which are not required to report their surplus to FEA are required to distribute their surplus in the same fashion.

Adjustments to Base Period Use

Because the base period year in many cases is 1972, FEA has provided adjustments to base period volumes to reflect changed conditions since 1972. An unusual growth adjustment was provided to adjust for actual growth in 1973 in excess of 1972 purchases less certain amounts. Until August 1974, the regulations provided a changed circumstances adjustment to reflect other growth. At the present time, base period volumes cannot be adjusted except upon a showing of serious hardship or gross inequity. The regulations, however, provide a basis to reflect increased current requirements for those consumers which have an allocation level expressed in terms of current requirements. These adjustments are more or less automatic unless a purchaser or his supplier disputes the amount of the increased current requirements. In cases of disputes, application must be made to FEA to resolve the issue.

State Set-Aside

Provision for emergencies is made under the regulations through the state set-aside program. Currently, a percentage of products subject to the state set-aside, such as gasoline and distillate fuels, which would be otherwise available in a state, must be set aside from the working stocks of the suppliers who serve the state to meet hardship and emergency requirements of consumers. The state set-aside for an allocation period cannot be accumulated or deferred.

Curtailments of Alternate Sources of Energy

Because of increasing curtailments of energy sources other than refined petroleum products, such as natural gas, FEA is required under the Act to give consideration to applications for assignment of suppliers and base period volumes to those persons who can use refined petroleum products and who have been curtailed from their primary fuels. FEA's regulations provide a detailed basis for consideration of these applications without creating undue problems for traditional users of refined products who must now share their fuels with new users with significant energy demands.

Special Provisions Applicable to Particular Products

As noted above, the general provisions provide a framework for allocation of all products. However, special considerations unique to certain products require distinct rules for allocating those products. The nature and extent of these special rules can be indicated by providing a few specific examples:

- (1) Aviation fuels, unlike gasoline, are allocated on a quarterly rather than monthly basis. Furthermore, the unique problems faced by international air carriers have required special rules to provide those carriers with domestic product without creating undue hardships for domestic air carriers.
- (2) Because propane is in short supply with increasing demand because of natural gas curtailments, several unique features have been developed for its allocation in addition to the general rules. A purchaser of other fuels may purchase his current requirements in excess of his allocation level if he can locate surplus product. However, many users of propane are limited by regulation in their use of propane, including their inventories, to prevent undue diversion of available propane stocks. Special rules have also been devised to regulate the use of propane by synthetic natural gas manufacturers.

- (3) In order to assure adequate supplies of fuel for heating, space heating fuels requirements are accorded an allocation level with a minimum allocation fraction a supplier may use to reduce the purchaser's allocation entitlement when the supplier experiences a shortage. For middle distillate fuels and residual fuel oil, the allocation level is 110 percent of the amount the purchaser used during the base period. In the event a supplier determines that his allocation fraction for period will be less than eight-tenths, the allocation level for space heating becomes 88 percent of base period use, not subject to the allocation fraction.
- (4) In order to assist utilities which use residual fuel oil, a special utility allocation program exists to allocate specified quantities of this fuel on a monthly basis to utilities. These quantities are determined each month by FEA and published in the Federal Register. Obviously, this allocation method can only be used in situations where there is a limited number of purchasers who report to FEA in order that their needs can be quickly assessed and suppliers advised on a monthly basis.
- (5) Motor gasoline retail sales outlets, with very few exceptions involving independent marketers, are treated in FEA's regulations as separate entities even when a number of such outlets are owned and operated by the same person or firm. Therefore, allocation entitlements of retail outlets are calculated on an individual station basis rather than for an entire chain of outlets. In order to provide marketers who own and operate two or more outlets, a certain amount of flexibility in marketing gasoline while generally preserving historical distribution patterns, FEA gasoline regulations permit a marketer to shift a portion of any outlet's entitlement to another outlet to respond to changing demand patterns. This shift is limited to an increase or decrease of 30 percent in any outlet's entitlement.

CHAPTER 2

THE MID-TERM OUTLOOK AND LONG-TERM TRENDS

The near future presents a range of factors which must be considered in any forecast. The unsettling effect of international oil price increases on consumers and on alternate energy sources will continue to create repercussions resulting in changes to established patterns of buyers behavior as substitutes are purchased in lieu of more expensive traditional choices. However, changes in fuel use cannot take place immediately and the timing of changes in response must be considered.

In this chapter projections of production and consumption levels are developed for coal, electricity (including nuclear generated electricity), natural gas, and petroleum products. These projections reflect historical patterns where applicable. In all cases, the trends have been modified to account for recent changes in price as indicated by the Project Independence Report. Where domestic supply is inadequate to satisfy demand, the expected requirement for imports is identified.

In Table 1, projections show that shortages in petroleum products (6.7 MMBD in 1975) will continue to be satisfied by imports. Growth in demand for electricity and coal will be satisfied by domestic sources, and substantial net exports of coal will continue. Imports of LNG and natural gas from Canada are assumed to continue at 6 to 8 percent of total demand.

Bottlenecks and problems in development are expected to occur in areas of finance, labor, and equipment. Lack of available financing could cause additional utility companies to cut back expansion plans. Shortages of shipyard labor may limit construction of off-shore drilling rigs. Steel may continue to be in short supply, making it difficult to obtain steel products such as heavy plates, forgings, and tubular goods. Walking draglines used in strip mining are backlogged until 1979. These problems and potential bottlenecks will also be examined in this chapter.

Coal

Expansion of coal production in the near term (over the next two years) is limited by several factors such as the availability of draglines and power shovels for coal extraction, and the availability of hopper cars for coal transport. Equipment

Table 1

PROJECTED ENERGY CONSUMPTION AND PRODUCTION
1975, 1980, 1985

	1975		1980		1985	
	Consumption	Production	Consumption	Production	Consumption	Production
Coal (Millions of Tons)	631.00	700.10	772.97	850.34	865.45	942.65
Electricity (Including Nuclear) (Trillions of KWH)	1.89	1.89	2.67	2.67	3.72	3.72
Nuclear (Trillions of KWH)	0.18	0.18	0.48	0.48	1.25	1.25
Petroleum Products (Millions of Barrels Per Day)	17.60	10.70	20.62	10.88 ¹	23.92	11.53 ¹
Petroleum Imports* (Millions of Barrels Per Day)	6.70		9.74		12.39	
Natural Gas (Deregulated Prices) (Trillions of Cubic Feet)	22.90	21.50	22.22	21.23 ²	23.20	23.19 ²

* In 1975 a .2 million barrel per day inventory reduction is forecast.

1 Including coproducts and refinery gains.

2 Including associated gas.

Source: Project Independence Report, Business as Usual \$7 without conserv.

Table 2
COAL PRODUCTION POTENTIAL
(million tons)

REGION	MINE TYPE	1977	Business As Usual 1980 1985	1990	1977	Accelerated 1980 1985	1990
Northern Appalachia	Surface	92.1	93.2	107.5	138.1	135.6	192.2
	Deep	118.7	121.4	135.9	145.8	177.4	269.8
	TOTAL	200.8	216.6	243.4	283.9	313.0	462.0
Southern Appalachia	Surface	92.6	111.0	137.2	164.6	166.6	245.1
	Deep	171.6	195.3	237.0	273.0	300.1	445.6
	TOTAL	264.2	306.3	374.2	437.6	466.7	690.7
Midwestern	Surface	118.8	133.7	159.1	187.9	196.5	287.7
	Deep	59.5	63.4	68.1	80.2	91.6	136.0
	TOTAL	177.3	197.1	227.2	268.1	288.1	423.7
Gulf	Surface	11.2	28.9	42.5	54.0	50.0	75.0
	Deep	-	-	-	-	-	-
	TOTAL	11.2	28.9	42.5	54.0	50.0	75.0
Northern Great Plains	Surface	64.4	99.6	152.0	184.5	185.9	302.6
	Deep	1.3	2.0	3.1	3.6	.9	1.5
	TOTAL	65.7	101.6	155.1	188.1	186.8	304.1
Rocky Mountain	Surface	16.9	19.8	24.4	29.9	29.9	49.4
	Deep	10.8	12.3	14.7	17.3	18.1	27.2
	TOTAL	27.7	32.1	39.1	46.1	48.0	76.6
Pacific Coast	Surface	7.9	12.3	18.5	23.1	23.1	33.8
	Deep	.1	.1	.2	.2	.2	.4
	TOTAL	8.0	12.4	18.7	23.3	23.3	34.2
National	Surface	393.9	498.5	641.2	779.8	787.6	1105.8
	Deep	361.0	396.5	459.0	530.1	598.3	877.3
	TOTAL	754.9	895.0	1100.2	1309.9	1375.9	2003.1

limitations are compounded by safety requirements and land-use policies in Western States; these factors have had the effect of making coal production more capital intensive, and more reliant on the availability of equipment for long-term expansion. Because of the two-to three-year lead time necessary to open new deep mines, little expansion of coal production from this source can be expected.

Exports of coal in recent years have amounted to about 10 percent of U.S. coal production. Coal is shipped to industrialized nations throughout the world, principally to Canada, Japan, and Western European countries. The United States is the world's largest coal exporter primarily because of the concentration of high quality metallurgical coal near its coastal areas. Imports (predominately from Canada) currently amount to .02 percent of U.S. coal consumption.

Coal production potential by region during the mid-term is shown in Table 2.

Electricity

The forecast of electric power consumption shown in Table 3 shows annual growth rates of -1.6 percent in 1974, 2.2 percent in 1975, 6.8 percent in 1976, and 9.4 percent in 1977. These changing growth rates reflect the current slowdown in the national economy, with expected recovery beginning at the end of 1975. The annual compound growth rate between 1973 and 1977 is approximately 5 percent. Net electricity imports are quite small, accounting for less than 1 percent of national consumption.

Table 3

ANNUAL DOMESTIC ELECTRIC CONSUMPTION *
(Trillions of kWh)

	1972**	1973**	1974	1975	1976	1977
Consumption	1.75	1.88	1.85	1.89	2.02	2.21
Growth (Percent)		7.4	-1.6	2.2	6.8	9.4

* Includes Alaska and Hawaii

** Actual

The forecasts for the years 1974-1977 are derived from estimates made for the Project Independence Report. A number of alternative scenarios reflecting three world oil prices were considered in that Report. The forecast presented in Table 3 is the average of the \$7 and \$11 oil cases. Electrical capacity projections for the end of the mid-term, broken out by types of fuel/power used, are shown in Table 4.

Table 4
ELECTRICAL CAPACITY PROJECTIONS
(Gigaelectron Volts)

	Existing, End/1973	1985 (in gigawatts)*	
		BAU (\$11/BBL	Demand Management**
Hydro GeV	65	100	100
Nuclear GeV	20	204	240
Coal GeV	167	327	379
Gas GeV	78	81	64
Gas GeV	61	48	48
Combustion Turbine GeV	33	162	171
Total Electricity	424	922	1002
Growth Rate, 1973-1985, %/year	---	6.3	7.4

* Beginning of year projections. (Nuclear at end of year would be 231 and 275 for BAU and AD respectively.)

** Without conservation

The demand management projection includes conversion of about 16,500 megawatts of existing oil-fired generation capacity to coal. The figures for combustion turbine capacity reflect projected increased market penetration of intermediate load combined cycle plans and continued use of gas turbine peaking plants.

Nuclear-Generated Electric Power

Nuclear-generated electric power currently comprises 4 percent of total electric power generation, and is expected to comprise 11 percent of the total by the fourth quarter in 1976. A slight increase in nuclear plant load factor, from 0.58 in 1975 to 0.59 in 1976, is also projected. These estimates include only plants in commercial operation. The forecasts of nuclear-generated

electric power and capacity are shown in Table 5. The estimates take into account postponements and cancellations reported through October 1974. These recent schedule changes do not significantly affect the 1975 and 1976 installed capacity estimates, but have substantial impact on the 1980 estimates.

Table 5
FORECASTS OF NUCLEAR-GENERATED ELECTRIC
POWER AND CAPACITY

End of Quarter	MW Installed During Quarter	MW Cumulative Installed	MWHRS Day by End of Quarter
4th CY 74		29,629	405,324
1st CY 75	3,406	33,035	459,847
2nd CY 75	3,476	36,511	508,233
3rd CY 75	965	37,476	521,666
4th CY 75	3,566	41,042	571,305
1st CY 76	2,765	43,807	620,307
2nd CY 76	2,973	46,780	662,404
3rd CY 76	2,330	50,914	720,942
4th CY 76	2,330	50,914	720,942
1980 Current Schedule	34,432	85,396	1,291,198
1980 Accelerated	48,170	99,084	1,498,150

Notes:

1. Installed capacity includes only plants in commercial operation (i.e., those in power ascension not included).
2. Power generation assumes capacity factors of 57 percent in 1974, and 1 percent per year improvement thereafter.

Petroleum Products Including Imports

The total level of demand for petroleum products projected for 1975 represents a recovery from the reduced consumption of 1974 resulting from the embargo, intensified conservation efforts, and a general economic slowdown. Increased demand over 1973 consumption is estimated to be 2 percent in 1975, and only 1.5 percent by 1976. This slow growth is attributed to conservation and the post-embargo increased prices notwithstanding the assumed economic recovery in late 1975 and 1976. In contrast to the substitutions for other products where the \$11 Project Independence scenario is assumed, the increases from the current levels of \$9 to \$10 for petroleum could have significant effect on the demand for refined petroleum products. Therefore, this section assumes a continuation of current prices and produces 1977 estimates that are proportionally lower than the \$7 but higher than the \$11 Project Independence scenarios.

Higher prices are a deterrent to any acceleration of the downward trend. The decline in domestic production is expected to continue at the current rate which started in 1970.

High import levels are projected for the forecast period. Because domestic supply incentives will not sufficiently change petroleum production in the short run, the excess of domestic demand over domestic supply is assumed to be met with imports.

Mid-Term Petroleum Production

Because of the long lead times required to bring new petroleum fields into production, domestic production of crude and natural gas liquids (NGL) will continue to decline for several years, regardless of higher prices or policies designed to encourage exploration. At minimum acceptable prices of \$4 a barrel or less, production could continue to decline throughout the forecast period, even with new production from the OCS and Alaska. The development of NPR-1 (Elk Hills) and extensive OCS leasing could increase production by only about one million barrels/day.

Under both BAU and AD assumptions, minimum acceptable prices of \$7 or higher would reverse the downward production trend. At \$7 and \$11 a barrel respectively, under the BAU scenario production could reach 11.1 to 12.2 MMBD by 1980, and 11.9 to 15.0 MMBD by 1985, exceeding the 1970 all-time high of 11.3 MMBD. See Table 6 for crude oil and natural gas liquids estimates.

Table 6

SUMMATION OF UNCONSTRAINED REGIONAL PRODUCTION POSSIBILITIES FOR
CRUDE OIL AND NATURAL GAS LIQUIDS
(Million Barrels per day)

<u>Business-As-Usual (BAU)</u>				
Minimum Acceptable Price Per Barrel*	1974	1977	1980	1985
\$ 4	10.5	9.0	9.8	9.8
7	10.5	9.5	11.1	11.9
11	10.5	9.9	12.2	15.0
<u>Accelerated Development (AD)</u>				
\$ 4	10.5	9.7	11.1	11.6
7	10.5	10.2	12.9	16.9
11	10.5	10.3	13.5	20.0

* Defined as exploration and production costs plus royalty and 10 percent after tax discounted cash flow from investment, but excluding lease acquisition cost and rental. These rents were evaluated after market clearing prices were determined.

Natural Gas

Forecasts of production and consumption of natural gas are subject to a number of uncertainties regarding the effects of regulation and the possibility of increasing output from known reservoirs. A number of different models of natural gas production are also available using differing assumptions and techniques of estimation. Two of these models are presented for comparison in Table 7 and are explained in the Project Independence Report.

Table 7

A COMPARISON OF TWO NATURAL GAS MODELS
Domestic Production (Trillions of Cubic Feet)

Year	TERA Model*		Project Independence Report	
	Regulation	Deregulation	Regulation	Deregulation
1974	20.6	20.7	21.8	21.8
1975	20.0	20.2		21.5
1976	19.4	19.8		21.3
1977	18.9	19.4	19.6	21.0
1980	17.3	18.5	17.3	20.3

* The TERA production figures have been adjusted, as explained in the Project Independence Report.

These models produce different forecasts of the level of potential production and demand, and illustrate the current uncertainty regarding the effect of reduced drilling activity in recent years. More precise forecasts cannot be made because it is difficult to anticipate events that might occur in 1975. Despite the many differences in these models, both project that output will be greater under deregulation than under continued regulation. The TERA model indicates the sizeable shortages will exist in the mid-term if regulation continues. These shortages will be less under deregulation.

The importance of liquefied natural gas has been the most satisfactory answer to the shortage of domestically produced natural gas in the mid-term. Some Canadian imports will probably be used to substitute for domestic gas, to some extent. However, in view of recent Canadian restrictions, pipeline imports from Canada may decrease. The mid-term forecast, summarized in Table 8, indicates a major trend for LNG imports.

Table 8

FORECAST OF LNG IMPORTS
(Trillion Cubic Feet)

Year	LNG Deliveries	Contract Signed	Prospective Contracts	Total
1975	0.02	0.41	0.13	0.56
1976	0.02	0.57	0.51	1.10
1980	0.02	0.72	1.28	2.02

If regulation continues, only part of the shortage can be met by pipeline or LNG imports. Other fuels such as oil or coal will undoubtedly be used to satisfy the shortage, particularly in the case of new customers who do not face costly conversion. The oil equivalent of the remaining shortage could be as much as 650 million barrels by 1980, although direct conversion of this demand is not possible. The Project Independence Report figures presented in Table 7 for 1974-1976 are interpolated from the 1973 actual and the Project Independence Report 1977 forecasts. The figures as presented in the Project Independence Report are gross consumption figures. However, these are equilibrium values and hence represent consumption which will be satisfied in the marketplace. The TERA model demand estimates may not be realized as consumption, due to insufficient supply.

Potential Problems and Bottlenecks

Our short-term supply forecasts may require amendment due to resource constraints in material, equipment, manpower, transportation, finance, and water. Currently, energy industries are encountering serious shortages in many of these resources. Orders for walking draglines used in strip-mining are backlogged until 1979; a shortage of shipyard labor is limiting construction of off-shore drilling rigs; and the lack of financing is causing some electric utilities to cut back expansion plans. In all energy industries, an overall shortage of steel products and tight availability of steel plate, forgings and castings, and tubular goods are affecting expansion and operations. Although the economy has traditionally

responded in a timely manner to increased resource demand, there are certain limitations that are difficult to overcome in the short run:

- ° Drilling rigs ordered in 1974 cannot be delivered until the first quarter of 1977.
- ° Steel products are currently in limited supply.
- ° Oil country tubular goods (OCTG) are in tight supply, reducing potential drilling in 1974 from 171 to 160 million feet.
- ° Manufacturers of walking draglines are fully committed for deliveries through 1979.

Drilling Rigs

Drilling rigs are used on-shore and off-shore for drilling exploratory wells. Manufacturing capacity for oil and gas drilling rigs has been estimated at 200 units for 1974. In the near term, under ideal circumstances manufacturers could expand capacity by 25 units per year; thereafter, a sustained annual growth rate of 15 percent could be achieved. Table 9 summarizes a forecast of drilling rig availability. Despite heavy demand and high backlog, the National Petroleum Council estimates that 1974 drilling rig production will be limited to 135 units, or roughly 68 percent of current capacity. Manufacturers are operating below capacity because of shortages in steel products, steel castings and forgings, tubular goods, and rig equipment.

Table 9

FORECAST OF DRILLING RIG AVAILABILITY (Units)

	Annual Availability Workable	Maximum Production Capacity	Exports	Attrition
1973 (Actual)	1,633	175	70	21
1975	1,773	225	93	25
1977	2,214	275	110	27

Under the availability levels shown in Table 9, the export market for land rigs will continue to be served and the share of domestic output sent abroad will remain at the current level of 50 percent. Even with a continued increase in drilling rig production in foreign countries, a decline in the percentage of domestically-produced rigs exported will probably not occur until 1980.

Steel Products

Steel is the basic material for virtually all capital equipment and construction throughout the energy sector. Raw steelmaking capacity, product rolling capacity, and the share of these capacities absorbed by the energy sector are difficult to measure. The primary data source for capacity estimates is reported raw steel production and product shipments; however, since there is a flexible output mix, sizeable fluctuations of data must be carefully adjusted before arriving at an estimate of capacity and growth.

The best estimate of the percentage of steel that could be absorbed by the energy sector without severely dislocating other sectors of the economy ranges between 7.2 and 11 percent; 1973 American Iron and Steel Institute data indicate that for that year the energy sector accounted for 9.4 percent of domestic shipments.

Recent estimates prepared for the Project Independence Report indicate that domestic steel-making capacity between 1974 and 1977 could increase from a level of 108.0 to 120.5 million tons of steel mill product per year. These estimates assume continuing availability of steel imports, amounting to approximately 8 percent of total domestic consumption, to help meet domestic steel demand.

If the development of domestic energy supplies is accelerated, incremental steel requirements by the energy sector would amount to more than 90 percent of the estimated 9.4 percent sectoral share of steel product availability. Under these circumstances, there is a potential constraint on energy development, particularly since steel must be available early in the expansion period. Any delay in the expansion rate of steel-making capacity would severely affect the entire domestic energy development program.

At present, the availability of financial capital appears to be the most serious constraint on steel capacity expansion. Capital expenditures in the steel industry have dropped steadily from a 1968 high of \$2.3 billion to a 1972 level of \$1.2 billion; they recovered slightly to \$1.4 billion in 1973

and are estimated at \$2.0 billion in 1974. To provide capital for necessary capacity expansion, investment must be increased to an estimated average level of \$4.5 to \$5.0 billion a year in the near future. Return on equity has fallen from 8.9 percent in 1966 to 5.7 percent in 1972, and throughout the last 15 years, profits of the iron and steel industry as a percent of net worth have been below the average for all manufacturing industries. The recent (1973-1974) recovery in profits and the industry's ability to attract capital must be placed in the context of these trends.

The availability of raw materials such as iron ore, coal and scrap is vital to steel capacity expansion; increases in steel capacity will require commensurate expansion of iron ore and coal mining capacities. Approximately one-third of the iron ore used in the United States is currently imported; a substantial development of domestic iron ore resources will be required to support steel-making expansion. Increased requirements for metallurgical coal will impinge upon the effort to expand coal output for electrical power generation.

Oil Country Tubular Goods (OCTG)

"Oil country tubular goods" is the trade term for products such as drilling pipe, casing, and tubing used in exploration and production drilling. The current shortage of OCTG stems from two recent events: the substantial increase in domestic drilling since the oil embargo, and a drop in United States imports of OCTG as international demand deflected supplies from the United States market. The response of OCTG manufacturers and supply houses was to change their inventory and distribution system from one of centralized inventories, held by themselves, to a decentralized system of inventory held by users. The independent oil drillers were affected severely by those actions during 1974, and an assistance program was launched to insure that they would not be placed at a disadvantage vis-a-vis the major oil producers who have greater purchasing power and more firmly-established supplier relationships.

The change to decentralized inventories has had the effect of raising considerably the required OCTG inventories, from a 1973 level of 567 thousand tons to an estimated 1975 level of one million tons. The resulting in-the-field shortage of accumulation decreases; by 1976, domestic supply should be in balance with demand, provided that OCTG manufacturers have access to sufficient quantities of steel, and steel pipe and

tubing. Tight supplies of these items would have an obvious negative impact upon OCTG availability, and upon drilling activities.

Walking Draglines

The walking dragline is essential to large scale surface coal mining: it is used to remove overburden in order to expose a seam of coal for extraction. There are currently only three manufacturers of walking draglines in the United States, and none abroad. The lead time for delivery is in excess of five years, with the industry essentially committed through 1979. The capacity estimates shown in Table 10 probably cannot be exceeded until 1979, since there are long lead times for plant construction; moreover, manufacturers are currently constrained by the availability of capital equipment such as large gear-cutting machines.

Such draglines appear to be in short supply, diversion of exports would add significantly to the domestic availability; 60 machines are forecast to be exported between 1975 and 1980. However, the legal and political ramifications of diverting exports would probably be severe: these machines are timely ordered on a long lead time basis, and are committed overseas for primary resource development, frequently within the scope of a national economic development effort. Moreover, at current prices of approximately \$13 million per large machine, this activity is a significant source of foreign exchange earnings.

Table 10
FORECAST OF DRAGLINE AVAILABILITY

Year	Current Output	Cumulative* Output	Cumulative* Exports	Energy Sector Availability (Cumulative)*
1973	21	N/A	N/A	N/A
1977	45	90	22	63
1980	50	240	60	168

* Cumulatively from January 1, 1975 through beginning of indicated year.

Manpower

Some energy-related construction occupations will have to expand at rapid rates to accommodate an energy strategy of accelerated domestic supply. The most serious shortages may occur in the following construction trades: plumbers/pipefitters, welders, electricians, boilermakers, millwrights and carpenters, and technicians. Energy construction projects would require close monitoring in the planning state to determine in advance the size and geographic location of energy construction activity. Occupations which are potentially in short supply are shown in Table 11.

In general, widespread shortages in energy-related occupations do not appear likely because the labor force has considerable capacity to adjust to changing manpower demands. Since energy sector employment is small relative to the size of the total labor force, market incentives should be sufficient to attract workers in the required numbers and skills.

Regional imbalances in labor supply are, however, expected. Labor shortages could occur in specific geographical areas which currently employ few workers in the energy sector but which would undergo rapid development in an accelerated supply strategy. New surface mines are expected to be opened on the Northern Great Plains, for example; these projects will require bulldozer operators and miners not now available locally in sufficient numbers. On the other hand, overemphasizing high wages to attract workers can actually lead to a labor surplus. Early advertisement of high wages in Alaska attracted more workers than could be absorbed by the Trans-Alaska pipeline development, and the estimated unemployment actually rose in that State from 9.2 percent in 1973 to 10.4 percent in 1973.

Finance

The most pressing financial problem in the energy sector pertains to public utilities. This is true in terms of its immediacy, its size, and its impact on future energy supply. If the immediate earnings problems of public utilities are not solved, further delay in the construction of new plants will occur. The current inability to raise substantial amounts of capital and the uncertainty of demand forecasts are causing utilities to delay construction of long lead time, high capital, low fuel costs base-load plants using coal or nuclear power. Projected sources and uses of funds for the utilities are shown in Table 12.

Table 11

CRITICAL OCCUPATIONS IN ENERGY-RELATED CONSTRUCTION

	Projected Energy-Related Construction Employment 1975a	Energy Construction Requirement 1978-1980b	Avg. Annual % Growth in Energy Construction Employment 1975-1980	Average Annual % Projected Growth in Total Construction Employment 1973-1980
Pipefitters/Plumbers	15,398	31,998	21.6	1.9
Welders	5,782	10,480	16.3	3.7
Electricians	8,639	17,393	20.3	1.3
Boilermakers	1,764	3,810	23.2	-2.9
Millwrights	3,870	8,316	23.0	-4.7
Carpenters	2,760	5,454	19.5	-0.9
Electrical Engineers	1,038	1,961	17.8	4.7
Geologists	264	486	16.8	6.6
Engineering & Science Technicians NEC	595	2,035	48.3	42.1
Draftsmen	3,237	4,852	10.0	10.0

a Source: National Planning Association.

b Average annual employment.

Table 12

PROJECTED PUBLIC UTILITY USES AND SOURCES OF FUNDS
(In Billions of 1973 Dollars)

Date	Total Sources	Internal Funds	Stocks	Bonds	Other		
					Long-Term Debts	Current Liabilities	Other Liabilities Plus Discount
1973	\$20.4	\$5.5	\$4.5	\$4.3	\$1.7	\$3.2	\$1.3
1974	26.1	6.5	3.6	8.0	2.7	4.0	1.3
1975	23.8	6.7	5.2	6.2	2.1	2.4	4.2
1976	25.5	6.7	6.0	6.7	2.2	2.5	1.3

Public utility needs for funds are likely to increase by nearly 30 percent in 1974, compared with 8 percent in 1973 and 12 percent and 14 percent in the preceding two years. Plant and equipment outlays are rising a little faster than in 1973. Short-term assets are growing at a tremendous pace; the rapid rise in fuel prices since late 1973 has greatly increased the cost of carrying inventories, and the accompanying rise in customer billings has meant a marked expansion in accounts receivable. As a result, the book value of electric utility current assets increased by more than \$2 billion in the first half of 1974 compared to an average first-half increase of less than \$300 million for the 1969 to 1972 period. The FEA estimate for current asset expansion in all of 1974 is more than three times the average annual increase of recent years.

At the same time, public utility profits (on a national income accounting basis) have not benefited from rate increases. Neither the increase in utility rates nor the fuel cost adjustment have been able to generate the earnings necessary to provide satisfactory coverage of sharply higher interest costs, or to permit the level of dividends expected by investors. With earnings and dividends declining in real terms and most utility stocks selling below their book value, new issues have been difficult to place. New stock issues of public utilities this year seem likely to be the smallest in dollar volume since 1970.

Electric utility projections are based on the assumption that regulatory commissions will grant immediate continuing increases in rates to allow an adequate rate of return to attract the capital needed to finance required expansion. Such price increases will have a two-fold effect. First, increased prices will slow the rate of growth to the industry. Second, the rate increases will permit the issuance of equities needed to finance required expansion. Because of high dividend payout rates, internal funds are not sufficient for the sector's growth. Increases in rates indirectly impact total funds by making new issues more desirable.

Finally, although price increases are essential, they can also lead to additional risk for this sector because of the uncertainty surrounding the price elasticity of demand for electricity. Many econometric studies of electricity demand estimate a price elasticity of about 1.0. If the consumption of electricity is as responsive to price as those studies imply, increases in electric rates that have occurred during recent years (and which are expected in the future) will dampen future demand growth more than FEA's 0.42 elasticity estimate.

Even if the immediate financing problem were to be resolved, a large infusion of equity capital will be needed before 1980. FEA estimates a 10-year growth in electric power output of 6.4 percent per year, and an increase in electric utility revenues of 7.9 percent per year, based upon a higher price of electricity.

Total uses of funds by public utilities during the 1975 to 1985 period are expected to increase by 38 percent to a peak in 1980 and then decline through 1984. This non-uniform pattern reflects the interaction of the projections for nuclear plants and for fossil fuel generating, distribution, and transmission facilities.

Internal funds, on the other hand, are expected to remain constant for the first five years and only rise by 3 percent a year in 1981. This sluggishness in the growth of internal funds means that huge amounts of new stock will have to be sold if debt/equity ratios are not to be increased substantially.

Requirements for external equity funds are projected to \$8 to \$9 billion for six successive years and are quite large throughout most of the period.

The volume of equity issues by all non-financial corporations in each forecast year when converted to 1973 dollars is about equal to the amount projected for public utilities alone.

The current crisis facing electric utilities is the difficulty these companies are now experiencing in raising sufficient capital to finance planned capacity expansion.

Conclusion

In summation, the energy situation in the mid-term can vary greatly depending on the actions of the United States Congress and State and local government in opposition to or in concert with the President's energy plan.

If unreasonable environmental restraints are placed upon coal mining, on the exploration of our outer continental shelf, and on refinery and electric utility siting, then we must not be surprised to see our vital domestic supply of energy shrink at a time when economic growth demands that it increase.

If, on the other hand, reasonable prices are assumed to oil producers, natural gas producers, and our electric utilities; if rate structures of state utility commissions are reformed; if utility siting and licensing procedures can be vastly streamlined; if utilities and other major fuel users can switch to coal, then this nation can rest assured that in the mid-term, it can escape vulnerability to foreign interruption of its vital energy supplies.

The President has shown that consumption in 1985 will reach 23.9 MMBD, with domestic supplies falling 12.7 MMBD short of this figure. Actions recommended by the Administration could increase domestic production by 4.2 MMBD. The Administration program would reduce consumption by 3.8 MMBD, leaving only 4.7 MMBD in imports. If this supply were to be suddenly curtailed as in 1973, it could easily be met by the President's initiatives for energy storage and standby authorities.

Obviously, this nation's mid-term supply of coal, petroleum and related products, natural gas, and electricity, conventional and nuclear, is not fixed. This supply, ten years from now, depends on the actions which we take today.

For the longer term, our goal is to sustain a position of energy independence, and to enhance it so that the United States will again be capable of supplying a significant share of the Free World's energy needs.

This means that, as a Nation, we must reaffirm our commitment to a strong energy research and development program, aimed not only at developing the capability to tap all our major domestic energy resources, but also at improving the efficiency of energy utilization in all sectors of our economy.

Last year, the United States committed itself to a five-year, \$10 billion energy research and development effort. Our 1975 Energy R&D Budget was twice that of 1974 and three times that of 1973. In 1976, this accelerated effort must continue, and the President has pledged to seek whatever funds are needed for future R&D activities.

Now that we have an Energy Research and Development Administration, a Federal Energy Administration, and an Energy Resources Council, we have, for the first time, both the unified Federal organization and the financial commitment to get the job done.

But energy R&D Funds and organization are not enough; we also need new incentives to assure that emerging technologies are not only developed in the laboratory, but brought into use in the marketplace. Therefore, the President has announced a National Synthetic Fuels Program which will assure the equivalent of at least one million barrels per day in synthetic fuels capacity by 1985. It will entail a program of Federal incentives designed to reduce price uncertainty, raise capital, and overcome unnecessary delays in bringing existing or nearly developed technologies into commercial use. The program will result in the commercial application of technologies of several types and in the construction of major new plants, using both shale and coal resources.

CHAPTER 3

SUMMARY OF ALL RECEIPIENTS OF FEA FUNDS

LISTING OF CONTRACTS AWARDED BY THE DEPARTMENT OF INTERIOR FOR THE FEDERAL ENERGY OFFICE AND CONTRACTS AWARDED BY THE FEDERAL ENERGY ADMINISTRATION

- PHASE I This phase listing includes all contracts awarded by the Department of the Interior for and in behalf of the Federal Energy Office during the period 1 November 1973 through June 26, 1974, prior to the establishment of the Federal Energy Administration.
- PHASE II This phase listing includes all contracts awarded by the Federal Energy Administration from the date of its establishment (June 27, 1974) through the date that the FEA Project Review Board was established (November 1, 1974) for the purpose of the review and approval of all proposed contractual actions above \$10,000 in value.
- PHASE III This phase includes all contracts awarded by the Federal Energy Administration subsequent to the establishment of the FEA Project Review Board (November 1, 1974) to the present.

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I FEO-DOI AWARDS - INTERAGENCY AGREEMENTS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
CEQ 14-01-0001-1704	50,000	Joint Effort for Research and Analysis of Energy Conservation	Active	N/A
U.S. Army 14-01-0001-1705	7,550	Data Processing	Active	N/A
OMB 14-01-0001-1709	40,000	Data Processing	Active	N/A
N.I.H. 14-01-0001-1720	5,000	Data Processing	Active	N/A
NBS 14-01-0001-1843	90,000	Energy Conservation Kit for Small & Intermediate Industrial & Commercial Plants	Active	N/A
Defense Supply 14-01-0001-1851	7,000	Storage Space	Active	N/A
NSF 14-01-0001-1853	70,000	Research to Develop Multiple Industrial Center Systems	Active	N/A
GSA 14-01-0001-1856	263,000	Study and Analysis of Energy Effective- ness of Federal Building, Manchester, N.H.	Active	N/A
MOD Total	75,000 338,000			
NBS 14-01-0001-1857	581,000	Energy Conservation in GSA Building	Active	N/A
NSF 14-01-0001-1863	93,371	Manpower Crop-Cutting Studies	Active	N/A
NSF 14-01-0001-1867	70,000	Identification and Resolution of Energy Related Problems	Active	N/A
CEQ 14-01-0001-1868	200,000	Professional Studies	Active	N/A

I FEO-DOI AWARDS - INTERAGENCY AGREEMENTS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Bureau of Mines 14-01-0001-1876	24,000	Storage Space for Gasoline Ration Coupons	Active	N/A
Department of State 14-01-0001-1877	50,000	Reimbursement for Staff Personnel	Active	N/A
Department of Labor 14-01-001-1881	4,296	Employee Health Service	Active	N/A
NSF 14-01-0001-1886	80,846	Interagency Energy Support Studies	Active	N/A
GSA 14-01-0001-1887	120,000	Transportation of Gasoline Ration Coupons	Active	N/A
TVA 14-01-0001-1903	56,000	Regions IV, IX, III Utilities Costs Analysis	Active	N/A
CEQ 14-01-0001-1906	69,831	Energy Conservation in the Inner City Transportation Sector	Active	N/A
Department of Commerce 14-01-0001-1909	67,000	International Conservation in Industry	Active	N/A
AEC 14-01-0001-1909	32,500	Access to AEC's Project Syncron Data	Active	N/A
NBS 14-01-0001-1910	15,000	Optimal Structure of an Allocation Program	Active	N/A
Dept. of Air Force 14-01-0001-1911	125,400	Demonstrate Retrofit Program to Promote Energy Conservation	Active	N/A
Dept. of Navy 14-01-0001-1912	9,000	Monitor Flow of Old Tankers Containing Petroleum Products	Active	N/A
NSF 14-01-0001-1927	80,000	National Governors	Active	N/A

I FEO-DOI AWARDS - INTERAGENCY AGREEMENTS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
NSF 14-01-0001-1928	25,000	Study by American Physical Society	Active	N/A
Bureau of Engraving & Printing 14-01-0001-2032	10,393,000	Printing Gasoline Ration Coupons	Active	N/A
State Department 14-01-0001-2033	95,000	Develop of the Energy Conservation Corps as a Volunteer Action Program in the Educational Communication Aspects of the Energy Crisis	Active	N/A
Dept. of Navy 14-01-0001-2034	20,000	Data Processing	Active	N/A
Federal Reserve System 14-01-0001-2035	7,500	Storage Services	Active	N/A
N.I.H. 14-01-0001-2036	6,000	Data Processing	Active	N/A
Geological Survey 14-01-0001-2037	40,000	Data Processing	Active	N/A
AEC 14-01-0001-2048	258,769	Long Term Effects on Energy Use From Land Use Choices	Active	N/A
CEQ 14-01-0001-2049	15,000	Energy Alternatives for Impact State- ments	Active	N/A
CEQ 14-01-0001-2050	125,000	Potential Energy Resources in Western US	Active	N/A
HUD 14-01-0001-2056	150,000	Broaden & Accelerate the Present MIUS Development of Methods to Utilize Currently Existing Technology to Obtain Energy from Solid Waste	Active	N/A
Dept. of Commerce 14-01-0001-2058	75,000	Investigation of Telecommunication Energy Problems	Active	N/A

I FEO-DOI AWARDS - NON PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Oak Ridge Assoc. Univ. 14-01-0001-1699 MOD Total	195,000 590,000 <u>785,000</u>	Provide Studies & Analysis Relating to Energy Policy Including R&D	Active	Sole Source
University of Penn. 14-01-0001-1700	25,000	Impact-Philadelphia-Lindenwald High Speed Line	Active	Sole Source
University of Penn. 14-01-0001-1848	49,138	Feasibility Study/Staggard Industry Hrs.	Active	Competitive
Battelle 14-01-0001-1874	122,856	Impact Steel Industry	Active	Competitive
Stanford Research Inst. 14-01-0001-1885	66,159	Study on Energy Conservation Measures & Their Potential U.S. Applicability	Active	Sole Source
Mass Institute of Tech 14-01-0001-1895	36,543	Study on Expansion of Oil & Gas Pipeline Transmission System in North America from 1974 - 1990	Active	Sole Source
M.I.T. 14-01-0001-2040	109,575	Provide Leading Indicators of Energy Sufficiency	Active	Sole Source
National Academy of Sciences 14-01-0001-2045	67,000	Asphalt and Emulsion	Active	Sole Source
Oklahoma State 14-01-0001-2031 MOD Total	75,000 35,026 <u>110,026</u>	Analysis of Current Uses to Retrofit Educational Facilities	Active	Competitive

I FEO-DOJ AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Arthur Anderson 14-01-0001-1606 MOD Total	474,000 298,234 <u>772,234</u>	Furnish Service Supplies for Organizational Procedures	Active	Competitive
On-Line Systems 14-01-0001-1612 MOC Total	745,200 193,000 <u>938,200</u>	Time Sharing Computer	Active	Sole Source
Advertising Council 14-01-0001-1613 MOD Total	150,000 400,000 <u>550,000</u>	Furnish Policy Guidelines Studies	Active	Sole Source
Hudson Institute 14-01-0001-1620	55,000	Furnish Policy Guidelines Studies	Active	Sole Source
American Management Sys. 14-01-0001-1621	128,900	Mandatory Petroleum Allocation Program	Active	Sole Source
Booz-Allen & Hamilton 14-01-0001-1645	19,400	Consequences to all Leisure Related Commerce of Current Energy Conservation	Active	Competitive
Schotka & Company 14-01-0001-1646	24,620	Petroleum Refinery Yield	Completed	Sole Source
Energy Resources Co. 14-01-0001-1648	24,321	Study on Gasoline Use By Commercial Forms and the Government	Completed	Sole Source
Data Resource Inc. 14-01-0001-1649	4,500	Conversion of Mineral Industry Surveys Data to Machine Readable Form	Completed	Competitive
James F. Deegan 14-01-0001-1650	3,550	Policy Simulation Analyses for the Texas-Louisiana Gulf Coast Petroleum Basin	Completed	Sole Source
Energy Resource Co. 14-01-0001-1651	22,117	Study on Thermal Pollution Abatement	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Development Planning & Research Associates 14-01-0001-1652 MOD Total	53,395 25,445 <u>78,840</u>	Economic Impact of Energy on the Food & Products Industries	Active	Competitive
Delex Systems 14-01-0001-1653	53,435	Economic Impact of Energy Shortages on the Logging and Sawmills, Paper & Allied Products Industries	Active	Competitive
International Research and Technology Corp. 14-01-0001-1654 MOD Total	57,148 11,750 <u>68,898</u>	Economic Impact of Energy Shortages in the Industrial Chemicals Industry	Active	Competitive
Foster Snell 14-01-0001-1655 MOD Total	57,240 2,600 <u>59,840</u>	Economic Impact of Energy Shortages in the Plaster & Rubber Industries	Active	Competitive
Cjbotka & Co. 14-01-0001-1656	12,500	Impact - Study of Petroleum Refining Industries	Completed	Competitive
Boo.-Allen & Hamilton 14-01-0001-1657 MOD Total	52,000 2,000 <u>54,000</u>	Impact - Study of Iron & Steel Indus- tries	Active	Competitive
Battelle 14-01-0001-1658 MOD Total	87,435 22,479 <u>109,913</u>	Impact - Study of Non-Ferrous Metals	Active	Competitive
Hittman 14-01-0001-1659 MOD Total	39,500 1,290 <u>40,790</u>	Impact - Study of Coal Industry	Active	Competitive

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Opinion Research Corp. 14-01-0001-1661	15,000	Public Attitude Survey	Completed	Competitive
NUS Corporation 14-01-0001-1662	6,500	Formulation & Implementation of Program for Allocation	Active	Sole Source
R. R. Nathan Associates 14-01-0001-1663	4,541	Design Program Implementation Manual	Active	Sole Source
Tetra Tech 14-01-0001-1664	85,969	Impact-Contract Construction Industries	Active	Competitive
MOD Total	54,019 139,988			
Douglas Queen 14-01-0001-1665	20,400	Impact-Hydraulic Cement Industry	Completed	Competitive
Stanford Research Inst. 14-01-0001-1666	48,600	Impact-Concrete Gypsum & Plaster	Active	Competitive
MOD Total	11,200 60,500			
Battelle 14-01-0001-1667	50,160	Impact-Glass Industry	Active	Competitive
Stanford Research Inst. 14-01-0001-1668	49,000	Research Projects & General Support to FEA	Active	Sole Source
MOD Total	642,930 691,930			
Versar 14-01-0001-1669	56,912	Impact-Drug Manufacturing	Active	Competitive
Peat, Marwick, Mitchell 14-01-0001-1670	47,447	Impact-Ground Freight Transportation	Active	Competitive
MOD Total	36,000 83,447			

I FEC-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
A. T. Kearney 14-01-0001-1671 MOD Total	67,522 3,241 <u>70,763</u>	Motor Vehicle Study	Active	Sole Source
Temple, Barker & Sloane 14-01-0001-1672	98,117	Micro-Economic Analysis of Energy Data	Completed	Sole Source
ICF, Inc. 14-01-0001-1673	14,000	Devise a Detailed Action Program for Implementing Mandatory Coal Conversion Program	Completed	Sole Source
Systems Publications Inc. 14-01-0001-1674	9,987.	Printing & Binding FEO Training Manuals	Active	Competitive
Applied Urbanetics 14-01-0001-1676 MOD Total	97,559 56,237 <u>153,796</u>	Pilot Project in Homeowner Energy Conservation	Active	Sole Source
Cameron Engineers 14-01-0001-1677 MOD Total	37,273 11,000 <u>48,273</u>	Professional Services to Support FEO Programs	Active	Sole Source
American Management Sys. 14-01-0001-1678 MOD Total	80,918 5,393 <u>86,311</u>	Support FEO Implementation of Energy Allocation Reg.	Active	Competitive
Arthur Young & Co. 14-01-0001-1681 MOD Total	174,000 181,170 <u>365,170</u>	Development & Implementation of Energy Allocation Reg.	Active	Competitive
Rand Corporation 14-01-0001-1682	18,271	Energy Conservation in Lighting	Active	Sole Source
Analysis & Programming 14-01-0001-1683	63,900	Professional Services for the Design, Develop. & Impl. of an integrated Petroleum Impact Data Reporting Sys.	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Kor Ferry Int'l 14-01-0001-1684 MOD Total	153,443 62,282 <u>215,725</u>	Design within FEO an Executive Development Program	Active	Competitive
Arthur Young & Co. 14-01-0001-1685	124,293	Gas Rationing Distribution System (Coupons)	Active	Competitive
Coopers & Lybrand 14-01-0001-1686	6,136	Studies Concerning Systemization & Standardization of Case Resolution Procedures	Active	Sole Source
Touche, Ross & Co. 14-01-0001-1687	38,320	Impact-Rising Crude Petroleum Costs on the Cash Flow of US Petroleum Refiners in 1974	Active	Sole Source
Inter City Funds, Inc. 14-01-0001-1688 MOD Total	67,400 63,125 <u>130,525</u>	Support FEO Program "Energy/Environmental Trade-Offs"	Active	Sole Source
Price Waterhouse & Co. 14-01-0001-1689	184,000	Gas Rationing Redemption Systems Design	Active	Sole Source
Washington Center for Metropolitan Studies 14-01-0001-1692	13,500	Reports Concerning Gasoline Usage and Car Driving	Active	Sole Source
Resource Planning Assoc. 14-01-0001-1694 MOD Total	44,500 183,614 <u>228,114</u>	FEO Study of the Administration Regulatory & Industrial Constraints in Development and Use of New Energy Sources	Completed	Sole Source
Exxon International Co. 14-01-0001-1695	25,000	Furnish Support Services, Supplies for Emergency Petroleum Supply Committee	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Motion Picture Assoc. of America, Inc. 14-01-0001-1696	51,441	Short Film on Energy Featuring K. Douglas & Wm. Simon	Completed	Sole Source
Commerce Clearinghouse 14-01-0001-1698 MOD Total	96,576 90,304 <u>186,880</u>	Loose Leaf Manual System	Active	Competitive
Science Applications Inc. 14-01-0001-1701 MOD Total	16,675 9,828 <u>26,503</u>	Technical Support	Active	Sole Source
ICF, Inc. 14-01-0001-1702 MOD Total	50,000 38,200 <u>88,200</u>	Ten Key Data Policy Tasks	Active	Sole Source
Lundberg Survey 14-01-0001-1703 MOD Total	228,730 31,605 <u>260,335</u>	Technical Services	Active	Sole Source
Clovis Heimsath 14-01-0001-1707	160,650	Retrofit Package for Tract Homes	Active	Competitive
General Electric Co. 14-01-0001-1712	13,000	Electric Power Transfer Between Pools - Training of FEO Personnel	Completed	Sole Source
Technology Management 14-01-0001-1713 MOD Total	50,000 43,000 <u>93,000</u>	Identify Energy Information Require- ments within FEO	Completed	Sole Source
Rand Corporation 14-01-0001-1715	43,107	Impact & Effectiveness of Energy Conservation Measures in Commercial Sector	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Resource Planning Assoc. 14-01-0001-1716 MOD Total	16,500 13,350 <u>29,850</u>	Professional & Consulting Services	Completed	Sole Source
American Management Sys. 14-01-0001-1717	47,600	Development of Economical & Timely Crude Oil Production Information System	Active	Sole Source
ERCO 14-01-0001-1718	59,975	Impact on Reduced Retail Store Hours	Active	Sole Source
Temple, Barker & Sloane 14-01-0001-1719	79,748	Technical Services	Active	Competitive
National Legislative Conference 14-01-0001-1832	92,450	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
National Governors Conference 14-01-0001-1833	99,850	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
National Assoc. of Counties Res. Foundation 14-01-0001-1834	99,664	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
National League of Cities 14-01-0001-1835	70,140	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
US Conference of Mayors 14-01-0001-1836	70,110	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
Council of State Governors 14-01-0001-1837	50,000	Plan for Improving Intergovernmental Energy Efforts	Active	Sole Source
Bookstaz of Britain 14-01-0001-1838	6,210	Provide Commercial Books, Documents, Reports	Active	Competitive

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Fred Troller 14-01-0001-1839	22,666	FEO Graphics/Identify Design Program	Active	Competitive
Concept Films, Inc. 14-01-0001-1841	125,000	16mm Color - Sound-on-Film Motion Picture on Energy	Active	Competitive
Gordian Associates 14-01-0001-1842	224,900	Potential for Energy Conservation in Selected Industry Categories	Active	Sole Source
Dubin, Mendell & Bloome 14-01-0001-1844	257,286	Manual for Energy Conservation in Existing Buildings	Active	Competitive
Ross & Barrizzini 14-01-0001-1845	75,500	Energy Conservation in Lighting	Active	Competitive
NOD	2,672			
Total	78,172			
Pace Company 14-01-0001-1847	25,000	Study on US Natural Gas Processing Industry and Refining Industry	Active	Sole Source
Dataquet 14-01-0001-1849	6,421	Implementation for Petroleum Allocation and Pricing Reg.	Completed	Sole Source
J. Makowsker Associates 14-01-0001-1850	8,500	Implementation for Petroleum Allocation	Active	Sole Source
Western Union 14-01-0001-1852	25,000	Provide Mailgram Service	Active	Sole Source
Decision Research Corp. 14-01-0001-1855	18,727	Oregon Plan on Gasoline in MA and VA	Active	Sole Source
Portland Cement 14-01-0001-1858	97,620	Energy Conservation in Cement	Active	Competitive
Ultra Systems 14-01-0001-1859	52,334	Creation of an International Petroleum Data Bank	Active	Competitive

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Data Resources, Inc. 14-01-0001-1860	87,696	Jorgensen Inter-Industry Model and Related Reports	Active	Sole Source
TRW 14-01-0001-1864	492,731	Potentials of Coal and Synthetic Fuels Production at Various Prices	Active	Sole Source
General Electric 14-01-0001-1865 MOD Total	83,220 33,963 117,183	Requirements for Project Independence Production Scenarios for 1977, 1980 1985, and 1990	Active	Sole Source
International Research and Technology 14-01-0001-1866	89,375	Expansion of Short-term Petroleum Supply and Demand Capability to Include and Use and Trends	Active	Sole Source
Bonner & Moore 14-01-0001-1869 MOD Total	204,324 17,500 221,824	Design of A World Petroleum Modeling System	Active	Sole Source
American Gas 14-01-0001-1870	90,000	Deep Cy of Tera Computer	Active	Sole Source
Data Resources 14-01-0001-1871	12,500	Houthakker Kennedy Petro Model	Active	Sole Source
Control Data Corp. 14-01-0001-1872 MOD Total	65,202 1,084,000 1,149,202	Computer Data for Energy Balancing of Supply and Demand in Project Indep.	Active	Sole Source
Lesko Associates 14-01-0001-1875 MOD Total	15,000 31,162 46,162	Professional and Consulting Services	Active	Sole Source
Battelle 14-01-0001-1880	149,870	Theoretical Thermodynamic Analysis	Active	Competitive

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Hittman Associates 14-01-0001-1888 MOD Total	100,400 16,115 <u>116,515</u>	Retrofit in the Commercial Sector	Active	Competitive
John B. Pierce 14-01-0001-1891 MOD Total	70,000 38,000 <u>108,000</u>	Energy Strategies and Guidelines on Heating, Cooling, and Its Effect on Human Comfort	Active	Sole Source
Westinghouse 14-01-0001-1892	233,985	Off Peak Power and Related Reports	Active	Competitive
Temple, Barker & Sloane 14-01-0001-1899	182,289	Analysis of 3 Separate Aspects of Electrical Utility Rate Setting	Active	Competitive
Ultrasystems 14-01-0001-1900 MOD Total	35,000 34,282 <u>69,282</u>	End Use of Conservation	Active	Sole Source
Jack Faucett 14-01-0001-1902	230,228	Development of Macroeconomic Energy Model	Active	Competitive
Richardson Associates 14-01-0001-1913	109,248	Financial Impact on Energy Community Resulting From the Energy Crisis	Active	Sole Source
Data Resources, Inc. 14-01-0001-1914 MOD Total	97,943 394,250 <u>492,193</u>	Econometric Modeling Service	Active	Competitive
Arthur D. Little 14-01-001-1915 MOD Total	53,356 77,541 <u>131,006</u>	Cross-Cut Studies On Manpower Availability, Transportation Requirements Completion for Available Capital Goals Incremental Water Requirements and Effect on National Economy.	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Mathematica 14-01-0001-1916	64,500	Tera Model Consultant Service	Active	Sole Source
Tele Processing Indus. 14-01-0001-1918	71,000	Collect Mailgrams in Route to FEO	Active	Competitive
Westinghouse Electric 14-01-0001-1920	50,000	US Petroleum Import Interruption Probability	Active	Sole Source
AEC 14-01-0001-1922	125,000	Project Independence Nuclear Energy Task Force	Active	Sole Source
OE-EDP Co. 14-01-0001-1926	22,000	Data & Key punch Verification Services	Active	Sole Source
MOD Total	7,400 <u>29,400</u>			
Geo. Search 14-01-0001-1929	93,620	Assess Future US Energy Import Require- ments, etc.	Active	Sole Source
LaRue, Moore & Schafer 14-01-0001-1930	87,338	Provide Consulting Services to FEO Task Force	Active	Sole Source
MOD Total	50,000 <u>137,338</u>			
Gas Development Corp. 14-01-0001-1934	2,200	Blueprint for the Natural Gas Task Force	Active	Sole Source
Resource Planning Assoc. 14-01-0001-1985	154,000	Study on Foreign Energy Conservation Measures and Their Political US Applicability	Active	Sole Source
MOD Total	195,000 <u>349,000</u>			
National Opinion Res. 14-01-0001-2001	29,234	Conduct an Income Study	Active	Sole Source
Spectro-Lab 14-01-0001-2002	10,325	Studies on the Solar Cell Industry For Project Independence	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Mathematica, Inc. 14-01-0001-2009	94,560	Determine Economic Impact of Changing Prices of Energy Consumption by Households & Income	Active	Sole Source
Energy Environmental Analysis 14-01-0001-2013 MOD Total	86,048 31,958 <u>118,006</u>	Study of Implementation of Industrial Goals	Active	Sole Source
ICF, Inc. 14-01-0001-2016	25,000	Conduct an Energy/Environmental Trade-Offs Analysis	Active	Sole Source
Dr. Anthony Kooharian 14-01-0001-2017 MOD Total	25,200 <u>11,000</u> <u>36,200</u>	Analysis in International Assessment	Active	Sole Source
Bechtel Corp. 14-01-0001-2019 MOD Total	50,000 <u>6,000</u> <u>56,000</u>	Study of Project Independence Blueprint Facilities Task Force	Active	Sole Source
Puryin & Gertz 14-01-0001-2020	51,252	Study of Petroleum Products & Process- ing Schedules for Achieving Indep.	Active	Sole Source
American Management Sys. 14-01-0001-2025	242,000	Design, Develop, and Operate a Weekly Petroleum Reporting System and Other Related Tasks.	Active	Sole Source
Arthur D. Little 14-01-0001-2026 MOD Total	98,000 18,894 <u>116,894</u>	Identification of Energy Financing Problems Concerning Size & Nature of Capitol Financing in the Energy Industry Between 1974-1990	Active	Sole Source
International Res. Group 14-01-0001-2027	59,588	Study Impact on Embargo on Europe & Japan	Active	Sole Source

I FEO-DOI AWARDS-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Utility Network of Amer. 14-01-0001-2038 MOD Total	50,000 237,000 <u>287,000</u>	Computer Services for Project I-dep.	Active	Sole Source
CACI 14-01-0001-2039 MOD Total	60,000 38,000 <u>98,000</u>	Computer System Study/Support of Interim Coal Monitoring System	Active	Sole Source
Temple, Barker & Sloane 14-01-0001-2041	56,992	Structuring a Coal Monitoring System	Active	Sole Source
Nossaman, Waters, Scott Krueger, Pearson 14-01-0001-2043 MOD Total	550,000 250,000 <u>800,000</u>	Detail Study to Evaluate the Option Option to US Government as it Relates US Firms in International Petroleum Affairs.	Active	Sole Source
American Management Sys 14-01-0001-2044 MOD Total	85,380 37,620 <u>122,900</u>	Project Independence Blueprint Study	Active	Sole Source
Rand Corporation 14-01-0001-2047 MOD Total	91,528 12,107 <u>103,635</u>	Project Independence Blueprint Study	Active	Sole Source
Lewin Associates 14-01-0001-2054 MOD Total	42,875 40,347 <u>82,222</u>	Study of Market Share Monitoring Adaptability	Active	Sole Source
Inst. for Def. Analysis 14-01-0001-2051	37,000	Cost of Interruption of Imports for 1975-1980	Active	Sole Source

II FEA PRE-PRB REVIEW COOPERATIVE AGREEMENTS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLJCITATION
Arizona State CA-04-50001-00	50,000	Arizona State Energy & Environmental Problems	Active	N/A
City of Louisville CA-04-50003-00	38,305	Project Button-Up 5-City Pilot Program for Insulation Retrofit	Active	N/A
City of Minneapolis CA-04-50005-00	24,500	Project Button-Up 5 City Pilot Program for Insulation Retrofit	Active	N/A
Hawaii CA-12-50007-00	76,700	State Energy Management Program	Active	N/A
Arizona CA-12-50008-00	111,400	State Energy Management Program	Active	N/A
Rhode Island CA-12-50016-00	82,900	State Energy Management Program	Active	N/A

II FEA PRE-PRB REVIEW INTERAGENCY AGREEMENT

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
USAF CG-02-50008	10,000	Data Processing	Active	N/A
DCMA CG-02-50013	35,000	Audit Contractor for FEA Contractors	Active	N/A
GSA CG-03-50003	3,000	Data Processing	Active	N/A
Food & Drug CG-03-50005	100,000	Data Processing	Active	N/A
DOI CG-03-50006	160,000	Data Processing	Active	N/A
OMB CG-03-50007	200,000	Data Processing	Active	N/A
NBS CG-02-50009	15,000	Study on Material Equip & Constr. Task Force	Active	N/A
Dept. of Transportation CG-03-50010	11,300	Data Processing	Active	N/A
DOI CG-03-50024	4,000	Data Processing Tape	Active	N/A
Bureau of Census CG-03-50025	150,000	Data Processing	Active	N/A
Bureau Lb. Stat. CG-03-50027	81,000	Bi-Weekly Retail Gas Survey	Active	N/A
Environ. Prot. Agn. CG-03-50030	5,000	Evaluate Project Independence Scenarios	Active	N/A
Atomic Energy Comm. CG-04-50012 MOD	217,200 46,000 <u>263,200</u>	End Uses of Energy in the Residential Sector	Active	N/A
Total				

II FEA PRE-PRB REVIEW INTERAGENCY AGREEMENT

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
USAF CG-02-50008	10,000	Data Processing	Active	N/A
DCAA CG-02-50013	35,000	Audit Contractor for FRA Contractors	Active	N/A
GSA CG-03-50003	3,000	Data Processing	Active	N/A
Food & Drug CG-03-50005	100,000	Data Processing	Active	N/A
DCI CG-03-50006	160,000	Data Processing	Active	N/A
OMB CG-03-50007	200,000	Data Processing	Active	N/A
NBS CG-02-50009	15,000	Study on Material Equip & Constr. Task Force	Active	N/A
Dept. of Transportation CG-03-50010	11,300	Data Processing	Active	N/A
DOI CG-03-50024	4,000	Data Processing Tape	Active	N/A
Bureau of Census CG-03-50025	150,000	Data Processing	Active	N/A
Bureau of State. Bureau of Stat. CG-03-50027	150,000	Bi-Weekly Retail Gas Survey Bi-Weekly Retail Gas Survey	Active Active	N/A N/A
Environ. Prot. Agn. CG-02-50020	81,000	Evaluate Project Independence Scenarios	Active	N/A
Atomic Energy Comm. CG-03-50012 MOD	5,000	End Uses of Energy in the Residential Sector	Active	N/A
Total	217,000 46,000 263,000			

I1 FEA PRE-PRB REVIEW NON-PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Battelle Memorial Inst. CO-03--50162	7,800	Project Independence DOM Pipeline Trans. System	Active	Sole Source

II FEA PRE-PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Science Communications CO-03-50034	51,761	Intra Industry Capability to Substitute Fuels	Active	Sole Source
MOD	25,000			
Total	<u>76,761</u>			
R. Shriver Assoc. CO-03-50035	172,000	Chase Data Bank Services	Active	Sole Source
Pace Company CO-03-50036	15,000	Study Energy & Petroleum to 1990	Active	Sole Source
Bunker Ramo CO-03-50037	5,004	Comp. Equipment Rental	Active	Sole Source
R. L. Polk & Company CO-03-50038	9,920	Gasoline Service Station List	Active	Sole Source
Washington Center for Metropolitan Studies	128,000	Household Energy Use Patterns Resurvey	Active	Sole Source
Chase Econometrics CO-03-50040	54,000	Dev. Proj. Indep. Econometric Impact Model	Active	Sole Source
MOD	<u>10,500</u>			
	<u>64,500</u>			
Data Resources, Inc. CO-03-50044	61,012	Economic Forecasting Model	Active	Sole Source
Bain and Company CO-03-50045	55,000	Data Validation Procedure Study	Active	Sole Source
MOD	<u>35,000</u>			
	<u>95,000</u>			
Martingale CO-03-50046	10,550	Modifying Martingale Charter Model	Active	Sole Source

II FEA PRE-PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
GRS & W, Inc. CO-03-50048	22,000	Exhibit Technical System	Active	Sole Source
Sobotka & Company CO-03-50051	24,650	Long Term Equilibrium Values Crude Oil Analysis	Active	Sole Source
Mathematica CO-03-50055	28,778	Design System to Evaluate Profi- ability	Active	Competitive
NOD Total	6,732 35,510			
Chemical Systems CO-03-50056	27,500	Product Analysis of Petro Chemical FoodStocks	Active	Competitive
Infodyne CO-03-50057	36,600	Analysis of Current & Projected Economic Environment	Active	Competitive
Computer Communications Inc. CO-03-50059	4,715	Provide C400 Communications Terminal	Active	Competitive
Tymshare, Inc. CO-03-50063	10,000	Access Tymnet Data Network	Active	Competitive

II FEA PRE-PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Teknekron, Inc. CO-04-50041-00	54,000	Analysis of Proposed EPA Thermal Guidelines for Steam Electric Power Plants	Active	Sole Source
MOD Total	<u>81,153</u> 135,153			
Educational Facilities Labs CO-04-50047-00	105,987	Energy Conservation in Public Schools	Active	Competitive
Resource Planning Associates, Inc. CO-04-50062-00	147,070	Project Independence Blueprint Environment Impact Statement	Active	Sole Source
MOD Total	<u>75,316</u> 222,386			
Pratt Institute CO-04-50077-00	60,427	Investigation of Energy Conserva- tion Impact on Policy	Active	Competitive
TRW, Inc. CO-04-50080-00	25,000	Single Tall Stacks/Power Plant Construction	Active	Sole Source
Energy Resources Company, Inc. CO-04-50081-00	76,419	Petroleum Products Production Costs	Active	Competitive
KVB, Inc. CO-04-50085-00	124,342	Study of Boiler/Furnance Efficiency	Active	Competitive
Urban Systems CO-04-50088-00	54,075	Energy Forecast to 1990	Active	Competitive
Foster D. Snell, Inc. CO-04-50090-00	48,443	Energy Conservation Papers on 4 Industries	Active	Competitive

II FEA PRE-PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Bransby Productions CO-04-50097-00	10,044	Produce 60 & 30 Second Film on Auto Fuel Economy	Active	Competitive
Cambridge Systematics CO-04-50106-00	73,629	Impact of Increase Carpooling	Active	Competitive
Charles River Assoc. CO-04-50115-00	111,500	Review of Demand for Transportation Fuel	Active	Competitive
ICF, Inc. CO-04-50117-00	16,737	4 Tasks/Home Insulation; Field Economy; Auto	Active	Competitive
Energy & Environmental Analysis, Inc. CO-04-50121-00	126,500	Energy Conservation Program Study	Active	Competitive
Radian Corporation CO-05-50092-00	52,863	Environment Assessment of 10 Power Plants	Active	Competitive
Ebasco CO-05-50095-00	80,000	Study of Coal Firing Capability	Active	Competitive
Inter-City Fund, Inc. CO-05-50099-00	19,500	Coal Supply & Transportation Forecast	Active	Competitive
American Management Systems, Inc. CO-06-50113-00	20,480	Planning Data on Coal Shortage	Active	Competitive

III FEA POST-PRD REVIEW - Cooperative Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
State of Vermont CA-04-50002-00	\$275,146	Electricity Utility Rate Structure Analysis on Customer Usage Pattern	Active	N/A
City of Indianapolis CA-04-50003-00	\$50,000	Project Button-Up 5-City Pilot Pro- gram Conservation Retrofit	Active	N/A
Kansas City CA-04-50-06-00	\$40,966	Project Button-Up 5-City Pilot Pro- gram Conservation Retrofit	Active	N/A
Maine CA-12-50009-00	\$84,400	State Energy Management Program	Active	N/A
North Carolina CA-12-50010-00	\$226,200	State Energy Management Program	Active	N/A
Florida CA-12-50011-00	\$285,400	State Energy Management Program	Active	N/A
Georgia CA-12-50012-00	\$209,100	State Energy Management Program	Active	N/A
South Carolina CA-12-50014-00	\$139,800	State Energy Management Program	Active	N/A
Oregon CA-12-50017-00	\$122,500	State Energy Management Program	Active	N/A
Tennessee CA-12-50018-00	\$186,000	State Energy Management Program	Active	N/A
Kentucky CA-12-50019-00	\$161,000	State Energy Management Program	Active	N/A
Oklahoma CA-12-50020-00	\$138,700	State Energy Management Program	Active	N/A
Texas CA-12-50021-00 XCD	\$221,327 <u>81,847</u>	State Energy Management Program	Active	N/A

III FEA POST-PRB REVIEW - Cooperative Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Vermont CA-12-50022-00	\$65,400	State Energy Management Program	Active	N/A
Arkansas CA-12-50023-00	\$116,700	State Energy Management Program	Active	N/A
Minnesota CA-12-50024-00	\$181,900	State Energy Management Program	Active	N/A
Alabama CA-12-50025-00	\$169,500	State Energy Management Program	Active	N/A
Iowa CA-12-50026-00	\$147,900	State Energy Management Program	Active	N/A
Pennsylvania CA-12-50027-00	\$458,800	State Energy Management Program	Active	N/A
Nebraska CA-12-50028-00	\$101,400	State Energy Management Program	Active	N/A
Massachusetts CA-12-50029-00	\$247,200	State Energy Management Program	Active	N/A
Nevada CA-12-50030-00	\$67,000	State Energy Management Program	Active	N/A
Oregon CA-04-50031-00	\$5,330	Setting Up Energy Conservation Manual	Active	N/A
MOD	2,665 \$7,495			
Total				
Kansas CA-12-50032-00	\$128,000	State Energy Management Program	Active	N/A
New Mexico CA-12-50033-00	\$85,200	State Energy Management Program	Active	N/A

III FEA POST-PRB REVIEW - Cooperative Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
New Hampshire CA-12-50034-00	\$75,600	State Energy Management Program	Active	N/A
Puerto Rico CA-12-50035-00	\$144,000	State Energy Management Program	Active	N/A
Mississippi CA-12-50037-00	\$126,900	State Energy Management Program	Active	N/A
Louisiana CA-12-50038-00	\$176,300	State Energy Management Program	Active	N/A
Wisconsin CA-12-50039-00	\$127,530	State Energy Management Program	Active	N/A
Minnesota CA-04-50040-00	\$40,000	Computer Prog. to Simulate Energy Consumption of Buildings	Active	N/A
Colorado Energy Research Institute CA-05-50041-00	\$100,000	Water Availability for Energy Develop- ment in the White River Basin	Active	N/A
American Samoa CA-12-50042-00	\$11,960	State Energy Management Program	Active	N/A
Michigan CA-12-50045-00	\$357,700	State Energy Management Program	Active	N/A
Ohio CA-12-50046-00	\$419,300	State Energy Management Program	Active	N/A
West Virginia CA-12-50047-00	\$110,500	State Energy Management Program	Active	N/A
Connecticut CA-12-50048-00	\$155,100	State Energy Management Program	Active	N/P
Maine CA-04-50049-00	\$75,000	Winterization of Sub-Standard Homes	Active	N/A

III FEA POST-PRB REVIEW - Cooperative Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Delaware CA-05-50050-00	\$9,000	Study of Laws Applicable to Construction of Deepwater Oil Terminal in Delaware Bay	Active	N/A
Utah CA-12-50052-00	\$86,700	State Energy Management Program	Active	N/A
Florida State CA-05-50053-00	\$15,000	Study of Solar Energy Heating	Active	N/A
Maryland CA-12-50034-00	\$186,000	State Energy Management Program	Active	N/A
Minnesota CA-04-50055-00	\$121,000	Study of Energy Audit Process for School Buildings	Active	N/A

III FEA POST-PRB REVIEWS - Interagency Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
National Bureau of Stnds. CG-03-50035-00	\$40,000	Study Relating to Estab. of Optimal Strucs.	Active	N/A
Dept of Treas. CG-03-50036-00	\$50,000	Computer SUCs for Proj Indep.	Active	N/A
Dept of Comm. CG-03-50040-00	\$11,950	Bibliographic Services	Active	N/A
MOD Total	<u>14,000</u> \$125,950			
Bureau of Mines CG-03-50061-00	\$29,180	Oil and Gas Reserves Analysis	Active	N/A
Environmental Protection Agency CG-04-50030-00	\$50,000	Quan. and Qual. Evaluation of Proj. Indep. Scenarios	Active	N/A
MOD Total	<u>20,000</u> \$70,000			
Environmental Protection Agency CG-04-50041-00	\$126,255	Testing of Fuel Additives on Improving Boiler Efficiency	Active	N/A
Dept. of State CG-04-50042	\$46,975	High School Public Educ. Campaign	Active	N/A
National Sci. Fndn. CG-04-50043-00	\$25,000	Study of Solar Assisted Gas Energy in Water	Active	N/A
HEW CG-01-50068-00	\$41,000	Public Health Services	Active	N/A
Dept. of Trans. CG-04-50044-00	\$48,000	Eval. of Effect of Urban & Suburban Hwy. Lighting Treatments	Active	N/A

III FEA POST-PRD REVIEW - Interagency Agreements

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
National Science Fndn. CG-04-50048-00	\$15,000	Study Energy Conservation in City of L.A.	Active	N/A
Urban Mass Transit Ath. CG-04-50051-00	\$48,000	Study Trans. Mode Costs	Active	N/A
Federal Hwy. Admin CG-04-50053-00	\$40,000	Eval. of Energy Savings Assoc. with Traffic Control	Active	N/A
HEW CG-04-50054-00	\$30,000	Develop. Concepts & Proc. of Life Cycle Costing	Active	N/A
Nat. Air and Space Adm. CG-04-50056	\$24,710	Provide Support for NASA ASEE Design Sys. Approach	Active	N/A
Dept of Agri. CG-04-50057-00	\$260,000	Study of In-Depth Energy Analysis of Agri/Prod.	Active	N/A
USAF CG-04-50060-00	\$100,000	Study Alternative Policies to Efficient Trans Modes	Active	N/A
National Sci. Fndn. CG-04-50062	\$10,000	Assessment of Telecomm. Transfer Int. Actions	Active	N/A
TVA CG-04-50063	\$80,000	Feasibility of Burning Solid Waste	Active	N/A
GSA CG-04-50064-00	\$400,000	Eval. of Tech. Life Cycle Cost Modelling	Active	N/A
Cons. on Environ. Qual. CG-04-50065	\$40,000	Study of Effects of Alternative Metro Dev. Patterns	Active	N/A
National Bur. of Snds. CG-04-50067-00	\$220,000	Dev. a Data Base for Energy Savir.gs for Mod-Residences	Active	N/A
Fed. Home Loan Board CG-04-50069-00	\$10,000	Study of Mortgage Delinq.	Active	N/A

III FEA POST-PFB REVIEW - Interagency Agreement

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
National Sci. Fndn. CG-05-50014-00	\$20,000	Study of R&D to Accelerate Prod. of Crude Oil	Active	N/A
US Geo. Survey CG-05-50026-00	\$200,000	Study of Oil Reserve Est.	Active	N/A
MOD Total	153,000 \$353,000			
Bureau of Mines CG-05-50058-00	\$2,500	To Pay for Costs Related to Reprod. of Records & Reports Incident to Analysis of Gas Fields	Active	N/A
DOI CG-05-50059-00	\$150,000	Analysis of 5 Oil/Gas Fields in Outer Continental Shelf	Active	N/A
National Sci. Fndn. CG-05-50066-00	\$4,407	Costs Associated with Ins. of Mid- west Coal Mines Oil Shale Op.	Active	N/A
ERDA CG-05-50070-00	\$100,000	Siting of Energy Park in South New Mexico	Active	N/A

III FEA POST-PRB REVIEW - Non Profit Organizations

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Interstate Oil Compact Cr. Co. CO-05-50130	\$20,000	Develop "Enhance Recovery"	Active	Sole Source
Montana Energy R&D Inst. CO-01-50114	\$19,200	Montana Energy Park Feasibility Study	Active	Sole Source
Seattle University CO-02-50105	\$17,100	Energy Management Education	Active	Sole Source
University of Okla. CO-03-50221	\$248,090	Develop. Data & Ana. of Prices and Cost of Oil	Active	Sole Source
Paul Douglas Cons. Research Center CO-01-50042	\$48,500	Model Consumer Affairs Sys. for State allocation Officers	Active	Sole Source
Colorado Seminary CO-04-50197	\$74,500	Socio-Economic Impact Study of Coal & Oil Shale Boom Towns	Active	Competitive
Standford Research Institute CO-03-50033	\$73,000	Examination of Air Tran. & Station, Air- craft and Parts Industries	Active	Sole Source

III FEA POST-PRB REVIEW - Non Profit Organizations

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Midwest Research Inst. CO-04-50067	\$64,000	Mass Metering	Active	Competitive
Georgia Tech. Research Inst. CO-04-50083	\$38,884	Literature & Physical Survey of Energy Consuming Industries	Active	Competitive
WCU Total	<u>49,500</u> \$88,384			
Auburn University CO-04-50100	\$44,645	Improve Boilers Efficiency	Active	Competitive
AIA Research Corp. CO-04-50122	\$19,900	Review Manual on Energy Conserv. in Existing Buildings.	Active	Sole Source
Mitre Corp. CO-05-50071	\$19,994	Energy Supply & Demand Analysis	Active	Sole Source
Mitre Corp. CO-04-50065	\$26,826	Unified 5 Year Transportation Plan	Active	Sole Source
Stanford Research Inst. CO-06-50101	\$9,950	Price Control Analysis Study	Active	Sole Source
Midwest Research Inst. CO-04-50116	\$150,000	Patterns of Energy use by Electrical Appliances Study	Active	Competitive
University of Maine CO-04-50084	\$6,370	Prepare Manual for Home Wiring Installation	Active	Sole Source
World Watch Institute CO-04-50146	\$47,400	Two Reports on Energy Conservation and Availability	Active	Sole Source
Mitre Corporation CO-05-50110	\$49,920	Study Major Trends in Coal Pricing Market	Active	Sole Source
MOD Total	<u>48,509</u> \$78,429			

III FEA POST PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
O. E. Enterprises, Inc. CO-03-50030 MOD.	\$200,000 <u>7,400</u> \$207,400	Key punch/verifier Oper/Computer Term Oprs.	Active	Competitive
Tabershaw Cooper CO-04-50098-00	38,358	Review EPA Documents on Health Effects of Increased Sulpher Emulsions	Active	Sole Source
National Analysts, Inc. CO-04-50119	33,700	Technical Evaluation of Project Conserve	Active	Competitive
Inter-City Fund Inc. CO-04-50123	42,000	Study Federal Fuel Economy Programs	Active	Competitive
Jack Faucett Assoc. CO-04-50123	97,980	Study of Difficulties in Overcomings of New Car Fuel	Active	Competitive
Energy & Environmental Analysis CO-04-50143	48,000	Analyze & Prepare Assessment Report for Energy Impact Studies	Active	Sole Source
Interplan, Inc. CO-04-50153	93,112	Study of Energy Conservation of Transportation Policy	Active	Competitive
Peat, Marwick & Mitchell Co. CO-04-50179	76,362	Carpooling Impact Study	Active	Competitive
McKinsey & Co. CO-01-50050	100,000	Mgmt. Organ. for FEA	Active	Competitive
Ward & Paul CO-01-50052	40,000	Trans. S'cs. for Hearings & Conf.	Active	Sole Source
Applied Mgmt. Sci. CO-01-50102	15,000	Review/Ana. Secondary Data on Elderly	Active	Sole Source

III FEA POST PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Unified Industries CO-01-50142	\$110,000	Small Minority Business Needs	Active	8a
A.L. Nellum Assoc. CO-01-50165	7,500	Special Data Impact of Energy Crisis on Disadv. Consumer	Active	8a
Compudemics CO-02-50161	7,000	Project Mgmt. Seminar	Active	Competitive
Touche Ross & Co. CO-02-50125	36,099	Compliance & Enforcement Audit/Field Training	Active	Competitive
AMS, Inc. CO-06-50140 MOD	21,907 24,325 <u>\$46,232</u>	Administration of Crude Price Equali- zation Program	Active	Competitive
Total				
Arthur Young & CO. CO-06-50155	44,835	Technical Assistance for Forms Design	Active	Competitive
Arthur D. Little, Inc. CO-06-50157	29,444	Review & Evaluate Petroleum Allocation Reporting System	Active	Competitive
LaRue, Moore & Schaffer CO-06-50160	48,000	Propane Supply & Distribution Structure	Active	Sole Source
AMS, Inc. CO-06-50206	59,740	Project Management Support to Coupon. Task Force	Active	Competitive
AMS, Inc. CO-06-50212 MOD	205,000 43,435 <u>248,435</u>	Develop Comprehensive Management System for Mandatory Oil Import Program	Active	Competitive
Total				
Halkirn Associates CO-09-50211	14,850	Energy Conservation Public Education Film	Active	Competitive

III FEA POST PRB REVIEW - PROFIT ORGANIZATIONS

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Teknekron CO-04-50213	\$ 18,000	Assess Energy Facility Planning & Development Act of 1975	Active	Competitive
Opinion Survey CO-04-50236	106,000	National General Public Energy Impact Study Weekly Report	Active	Sole Source
Radian Corporation CO-05-50092	103,500	Study of Environmental Assessment of 10 Power Plants	Active	Sole Source
NOD	<u>19,000</u> <u>122,500</u>			
Energy & Environmental Analysis CO-05-50143	70,000	ESECA Impact Assessment	Active	Sole Source
Arthur Young & Co. CO-06-50124	27,500	Study Adjustments to Base Period Volumes	Active	Competitive
Gordian Associates CO-04-50171	60,000	Heat pump study	Active	Competitive
Touche Ross & Co. CO-06-50285	175,000	Support program of Ore Act price allocation	Active	Competitive
Battelle Memorial Inst. CO-06-50280	200,000	Support program of Ore Act price allocation	Active	Competitive
Resource Planning Assoc. CO-06-50283	100,000	Support program of Ore Act price allocation	Active	Competitive
Arthur Anderson & Co. CO-06-50284	50,000	Support program of Ore Act price allocation	Active	Competitive
Ultrasystems, Inc. CO-04-50202	21,000	Analysis of commercial building buying processes	Active	Competitive
Gordian Associates CO-04-50235	31,000	Technical analysis support services	Active	Competitive

III FEA POST-PRB REVIEW - Profit Organizations

CONTRACTOR AND NUMBER	AMOUNT	SUBJECT	STATUS	TYPE OF SOLICITATION
Booz - Allen & Hamilton CO-04-50303	25,000	Technical Analysis Support Services	Active	Competitive
Resource Planning Assoc. CO-04-50300	850,000	Policy Analysis	Active	Competitive
Design & Production, Inc. CO-05-50260	12,775	Quick Response - Coal Map Project	Active	Competitive
Arthur D. Little CO-06-50281	200,000	Support Program of Ore Act Price Allocation	Active	Competitive
Stanford Research Inst. CO-50282	75,000	Support Program of Ore Act Price Allocation	Active	Competitive
On Line Systems CO-03-50118 MOD Total	462,000 110,000 572,000	Data Processing	Active	Sole Source
Grumann Data CO-03-50128	19,061	Oil & Gas Reserve	Active	Competitive
Data Technology CO-03-50129	22,400	Market Share System	Active	Competitive
American Management Sys. CO-03-50137	14,900	Stimulate Exploration of Fossils Fuel	Active	Competitive
Nuclear Assurance Corp. CO-03-50156	43,375	Report on Analysis of Long Term Impact	Active	Sole Source
Raven Data Processing CO-03-50159	65,000	Data Processing	Active	Competitive
American Management Sys. CO-03-50177	222,470	Proj. Indep. Support Modify Form 90	Active	Sole Source
AMS CO-03-50212 MOD Total	205,000 40,000 245,000	Design System for Mandatory Oil Import Prog.	Active	Competitive

CHAPTER 4

SUMMARY OF INFORMATION GATHERING ACTIVITIES OF THE FEDERAL ENERGY ADMINISTRATION [In compliance with Public Law 93-275, Section 15(c)(5)]

<u>Project</u>	<u>Description</u>
I. <u>Office of Communications and Public Affairs</u>	
Newsclips	Energy news items are compiled from morning issues of major newspapers, afternoon news wires, and weekly news magazines.
"Weekly Regional Digest"	This is a weekly comilation of newspaper clippings from the FEA regional offices on local and regional news.
"New England Ledger" and Other Regional Newsletters	Monthly energy newsletters on regional matters are published by the Public Affairs Divisions of FEA regional offices in Boston, Atlanta, and Chicago.
"Energy Reporter"	This is a monthly energy newsletter distributed nationally to various media and civic and commercial organizations sponsoring energy-related programs.
Speakers' Kits	These include comprehensive explanations of energy problems and solutions in simple language, including model speeches, fact sheets, and visuals for use by community and organization leaders and public speakers.
Teachers' Guides	These are classroom teaching kits for use by teachers. Include background on general and specific energy topics, reproducibles for student handouts, transparencies, student activities and references.
Media	Spokespeople for FEA to the news media achieve information goals through press releases, fact sheets, interviews, special briefings, news conferences, Black News Notebook, Weekly Column, Spotmaster, and Spanish Language Program.

I. Office of
Communications
and Public Affairs
Cont'd.

Factbooks

Compendiums of energy statistics, definitions and current issues are compiled for the FEA staff, especially for those dealing with the public.

Briefing Books and
Q's and A's

These are overviews of issues and events specifically related to public appearances by the Administrator.

Publications

These include technical publications on the historic, current, and potential energy situations, including resources, costs, distribution, and conservation; published to inform the decision makers of national energy policy and programs in government, industry, and consumer organizations. Nontechnical publications, including brief pamphlets and fact sheets, are on all phases of the energy situation to inform and enlist the support of the total public audience (government, industry, labor, the home, and at school).

Charts, Viewgraphs,
and Other Visual
Aids

These are prepared for presentation to general audiences and the news media by the Administrator and other FEA spokesmen. Also prepared for technical and nontechnical publications intended for specific and general public readers, e.g., the pictorial "Energy Ant" is designed for ages 6 to 10.

Photo- Journalism
Presentations and
Support

This is photographic presentation of the energy message, prepared for internal and public audiences, including the news media. Includes distribution of fully prepared picture stories, and maintenance of slide- and still-photo files.

Motion Pictures,
Slide Presentations,
and Filmstrips

These are prepared for special and general audiences, including the basic FEA educational film, "When the Circuit Breaks."

I. Office of
Communications
and Public Affairs
Cont'd.

Exhibits and
Displays

These are prepared for governmental and public conferences and conventions.

Radio and TV
Public Service
Announcements

These projects are produced in support of FEA and Presidential programs.

Radio-TV Newslines
Features

These are produced for daily broadcasting. In addition, specially recorded energy statements are provided to broadcast news media.

III. Office of Inter-
governmental,
Regional, and
Special Programs

Report on Expenditures for Ongoing State Energy Programs

Under a cooperative agreement with FEA, the states receive Federal reimbursement for their energy program expenditures. The agreement requires quarterly reports that detail the expenditures and the results.

III. Office of
Regulatory
Programs

Surplus Product
Report

This is a report of surplus volumes of suppliers under the Emergency Petroleum Allocation Act to the fuel manager: monthly where applicable.

Crude Oil
Allocation

This is a quarterly report of crude availability and runs to stills of refiners for allocation via the buy-sell list under EPAA. This also includes a transaction report of such sales.

Mandatory Oil
Import Program

This is a monthly reporting of import activity and annual reporting of data for import license allocation and issuance.

IV. Office of Energy
Conservation and
Environment

Railway and Street
Lighting Electrical
Usage

Electrical usage data for railway and street lighting is collected monthly from the Edison Electric Institute for inclusion in the energy consumption section of the "Monthly Energy Review."

Consumer Behavior and
Attitudes Regarding
Energy

Interviews are carried out on a continuing basis to study the effects on consumer behavior and attitudes of energy availability and energy costs.

Federal Energy
Management Program

The Federal Energy Management Program is aimed at reducing the use of energy in the Federal Government, as directed by Presidential Order. The program is administered by FEA which collects data every quarter on the amount of energy used by some 25 departments and agencies.

Analysis of Car-
pooling Attitudes

Information will be collected about attitudes toward carpooling from individual commuters. Respondents will be asked a series of trade-off questions which will assist FEA in designing strategies to induce a shift to greater usage of carpools.

Voluntary Industry,
Wide Energy Reporting
System

Trade associations will begin reporting this spring, on a voluntary basis, energy-use information covering 6 energy intensive industries. The data will enable FEA together with the Commerce Department to track industry progress in conserving energy.

Voluntary Company
Energy Reporting
System

A system is under development by FEA to monitor periodically the use of energy by selected companies in the industrial sector. The information obtained will allow FEA to monitor company progress towards meeting their energy conservation goals.

IV. Office of Energy
Conservation and
Environment Cont'd.

Evaluation of Impact
of 1975 Gasoline
Mileage Labels and
Guides for New Car
Buyers

Survey data will be collected from a sample of new car buyers to determine the impact of the mileage labels that are being attached to 1975 model-year cars as well as the mileage guides that have been distributed showing the average miles per gallon of all new cars.

Current State and
Local Winterization
Efforts

A survey is being conducted from a sample of community action agencies to find out what efforts have been made to winterize homes within their jurisdiction. The results obtained from this survey will provide a guide for program design of the Federal winterization program that has been proposed by the President.

Conservation Awards
Under Lighting and
Thermal Operations
Program

An awards system is being designed to encourage and recognize outstanding levels of energy savings achieved through the FEA Lighting and Thermal Operations Program. This program is aimed at reducing the use of lighting and lowering thermostats in commercial, public, and residential buildings.

Disaggregated Energy
Conservation Data
Base

A data base will be developed of energy consumption disaggregated by fuel type, economic sector, functional end-use, and geographical location covering 3 previous years. The data will be used for identification of how and where energy is consumed. Data will be pulled together from various statistical sources.

Homeowner Energy
Conservation

A pilot survey of 2,000 single family homeowners in 2 cities was conducted to collect information about the thermal characteristics of their homes. In return, respondents received a computer analysis of what it would cost them to insulate their home as well as the payback period or amount of time it would take to recoup their costs in terms of energy savings.

IV. Office of Energy
Conservation and
Environment Cont'd.

Winterization Pilot
Program

FEA is providing funds to Maine to collect information about the state's winterization program (insulating homes of low income persons) The data gathered will assist in the program design of the President's proposed national winterization program.

Energy Conservation
Technical Assistance
Compendium for
Industry

To help satisfy industry inquiries about ways to conserve energy, information has been gathered listing organizations (Federal and state agencies, universities, business firms, and trade associations) that offer technical assistance on how to conserve energy in industrial facilities.

V. Office of Energy
Resource
Development

Power Plant
Productivity
Study

This is a study of increasing productivity of power plants. Uniform reliability standards to be developed through data gathered by direct contact and regional meetings.

National Strategic
Storage Programs

Ongoing program is for developing civilian and military petroleum storage facilities. Questionnaires being used in organized data collection effort.

National Energy
Siting Plan

Study on sites is for needed energy facilities. Data gathered through interagency collection from the Office of Management and Budget, the Bureau of Mines, the Federal Power Commission, and the Department of the Interior.

Synthetic Fuel
Commercialization
Program

Program is to achieve 1 million barrels of petroleum per day by 1985 from sources such as shale. Established interagency task force gathering data.

V. Office of Energy
Resource
Development Cont'd.

Program to Accelerate Construction of Power Plants This concerns financial data on utilities gathered from financial and annual statements.

Program to Maximize Coal Usage by Utilities Survey forms and questionnaires were mailed to utilities to determine candidates for conversion to coal usage.

250 New Coal Mines Program Goal is making fullest use of coal within environmentally acceptable limits. Bulk of information to be gathered via Coal Industry Advisory Committee.

VI. Office of
International
Energy Affairs

U.S. Coal Market Study Analysis of the possible logistical constraints on the transportation of coal. Information sources: FEA's Office of Coal and the U.S. Railroad Association, where representatives were interviewed on problems facing the railroad industry in the transportation of coal.

Near-Term Emergency Stockpiling Study of FEA contingency plans vis-a-vis International Energy Program for a short-term or medium-term embargo. External information: briefing by the Central Intelligence Agency on floating storage and its possible utilization during an embargo.

Foreign Ownership, Control and Influence on Domestic Energy Sources and Supplies: Report to Congress, December 1974 This is a report on the influence and control of foreign ownership on domestic energy sources and supplies. The Bureau of the Census was the primary external information source, providing data on a contract basis on the foreign control of production. Information was also obtained from the Departments of Treasury, Interior, and Justice, the Securities and Exchange Commission, and the Council on International Economic Policy.

VI. Office of
International
Energy Affairs
Cont'd.

Organization for
Economic Coopera-
tion and Development/
International Energy
Agency Demand
Restraint
Questionnaires

This is a report on the design,
status, and impact of the U.S.
program for restraining oil con-
sumption during an emergency.

International
Allocation of Crude
Oil and Refined
Products by 13
Largest U.S. Oil
Companies,
July 1972,
July 1974

Analysis of allocation of inter-
national crude and product supplies
to major consuming regions is to
determine behavior of U.S. companies
during the Arab oil embargo.

Creation of the
International
Energy Agency

This is to provide data necessary
to support the activities of the
International Energy Agency pur-
suant to the International Energy
Program, e.g., on crude oil
production, imports, consumption,
on possible emergency consumption
restraint programs, and on the
activities of U.S. oil companies,
such as sales volumes, crude oil
transfer prices, etc. Other
similar information gathering and
analytic activities of this office
have been related to the development
of U.S. bargaining and negotiating
positions on energy-related issues
arising in the OECD and the IEA.

FEA's International
Petroleum Options
Report

Analysis of current options of the
U.S. Government in its relationship
to oil companies, including sampling
of industry attitudes on major energy
issues.

The Relationship of
Oil Companies and
Foreign Governments

These are descriptions of government/
industry relationships in 26
selected countries.

VII. Office of Policy
and Analysis

National Energy
Information
Center

This serves as an energy information clearinghouse for Federal and state governments, and public and private sectors. Collects and analyzes energy facts, sources, and publications in response to questions; disseminates energy information and refers questions to recognized information sources.

Market Shares
Analysis

This report changes in aggregate shares of branded independent, nonbranded independent, and other marketers of refined petroleum products for ongoing trend analysis. (Forms used: P303-S-0, P304-M-0, P306-M-0, P308-S-0, FEA F-70.)

Data collection efforts:

1. Refiner/Importer Survey of Motor Gasoline Sales -- results summarized in August 38, 1974 report, "Petroleum Market Shares."
2. Monthly Survey of Gasoline Service Stations -- conducted by Bureau of Census acting as the collection agency for FEA. Two reports transmitted to Congress in March 1975.
3. Historical Survey of Refiners and Importers -- questionnaire (FEA Form P305-S-0) mailed. Results available April 1975.
5. Historical Survey on Nonbranded Independent Marketers -- questionnaire mailed to non-branded independent marketers of gasoline. Results available in April 1975.

VII. Office of Policy
and Analysis
Cont'd.

Federal Energy
Information
Locator System

This is an index of energy information in Federal Government. Includes: personnel, contacts, data forms, publications, and program objectives by data files/bases. Information available through National Energy Information Center.

Exports Monitoring

A system that collects, matches, and reports data on exports and imports of petroleum, nuclear, petrochemical, and coal products. Data derived from Census import/export tapes, and licenses from the Department of Commerce.

Crude Oil Cost
Equalization

This calculates entitlements for the purpose of equalizing costs to refiners and importers based on monthly data forms. (FEA data collection forms P102-M-0, P103-M-0, P104-M-0)

Crude Oil
Allocation

This provides buy/sell information on crude oil. (FEA data collection form P101-Q-0)

Refinery Cost
Passthrough

This is a method that collects and evaluates data concerning cost passthrough information of refiner cost of crude oil, i.e., the amount that refiners may increase their product prices. (FEA data collection form 96)

Transfer Pricing

This stores and retrieves data on imported crude oil volume and pricing by oil type and identifies typical transfer prices. (FEA data collection form F701-M-0)

Electric Utility
Residual Fuel
Allocation

This processes residual fuel data from FPC Forms 23 and 23A and computes residual fuel oil allocations for electric power utilities. (FPC data collection forms 23 and 23A)

VII. Office of Policy
and Analysis
Cont'd.

Propane/Butane

This is a report of inventory changes and differences between propane/butane requirements and available supplies by state. (FEA data collection forms FEA-100A, FEA-103B, FEA-101A)

Subpart L
(Allocation
System)

These are summaries of fuel availability for distribution by state, by company, and by nation and summaries of crude oil refineries, operations and imports. Tables 2, 10, and 11 produced regularly in the summaries. (FEA data collection form 1000)

Crude Oil Pricing
and Production

This collects data on petroleum and crude oil production and pricing for monitoring of compliance with regulations. (FEA data collection form 90)

Heating Oil

This collects data on No. 2 heating oil for policy decisions and for monitoring of regulation compliance. (FEA collects data using CLC forms 92 and 92A.)

Jet Airline Fuels

This concerns nonbonded jet fuel, 1973 base consumption by month for each major interstate airline. (Data collection form CAB T-90, "Fuel Consumption and Inventory")

Petroleum Import
Reporting

This identifies crude oil and petroleum product imports by country of origin. FEA processes U.S. Customs Service data.

Monthly Petroleum
Reporting

This records stocks and inputs/outputs for refineries, crude and petroleum products at primary terminals, pipeline companies and importers. (FEA data collection forms FEO-1002-CP, 1003-RF, FEO-1004-PP, FEO-1005-IM, FEO-1006-BT, FEA-1007-SR)

Earnings Analysis

This is an analysis of petroleum industry and national earnings ratios and distribution of earnings factors. FEA processes Department of Commerce data.

VII. Office of Policy
and Analysis
Cont'd.

Electric Utility
12 Month Program

This is a calculation and graphic illustration of electricity generation and projections of fuel use. (FPC data collection forms 23 and 23A)

Monthly Reporting on
Nuclear Power
Production and
Nuclear Fuel Cycle

Data are gathered on uranium ore mining and processing; conversion of refined uranium ore to uranium hexafluoride; uranium enrichment; fuel and fabrication; electricity generation; and spent fuel reprocessing. Variables monitored are quantities produced, inventories, shipments, value added, and electricity production. Data are obtained from the Nuclear Regulatory Commission, Nuclear Assurance Corporation, and trade journals.

Quarterly Production
of Solar Collectors

This is a telephone survey of solar collector manufacturers to determine the number of square feet produced in calendar year 1974. This supports a calculation of the possible fossil fuel energy savings.

Quarterly Production
of Insulation

This is a telephone survey of insulation manufacturers to determine the amount of insulation produced in 1974. Part of a program to monitor progress in the retrofitting of homes with insulation.

Monthly Asphalt
Report

This reports production and stocks of asphalt (monthly from April through November) at refineries and bulk terminals. (Data collected from BOM forms 6-1300-M and 6-1302-M)

Steam Utility
Fuel Cost

This is a collection of costs of fossil fuel used. (Data collected from FPC.)

Purchase and Sales
of Natural Gas by
Major Pipelines

These are reports on pricing of natural gas. (Data collected from FPC.)

VII. Office of Policy
and Analysis
Cont'd.

Oil and Natural
Gas Reserves and
Resources

On a one-time requirement, FEA is to collect reserves data from approximately 15,000 active oil and gas operators to produce a report for Congress and the President. (FEA data collection is on form P-301-S-0.) A statistical estimate of oil and gas resources will be made by Policy and Analysis, and Energy Resource Development will provide a geologic estimate of these resources.

Gasoline Prices

This reports retail gasoline prices and margins for about 22,000 stations in 31 cities. (Lundberg Survey)

Diesel Fuel Data

Diesel fuel prices are collected from those gasoline stations included in the Lundberg Survey plus 80 truck stops.

Refined Product
Prices

National average prices of 11 refined products are reported by all refiners and those resellers with annual sales greater than \$50 million. (Form CLC-90)

Coal Reserves
Survey

Data have been collected from Bureau of Mines, U.S. Geological Survey, and other sources. A preliminary report is planned this month. Plans also include sending a questionnaire to a substantial number of coal companies as well as other known holders of coal reserves.

Coal Production
Reporting System

Data have been gathered from Bureau of Mines' annual form 1401. The data for 1973 are being automated. Monthly data are being gathered from Mining Enforcement and Safety Administration to upgrade the entire monthly reporting system on coal production.

END

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